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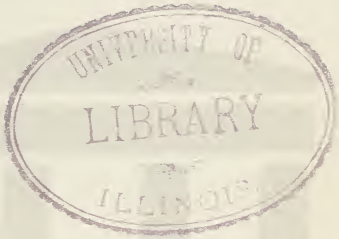

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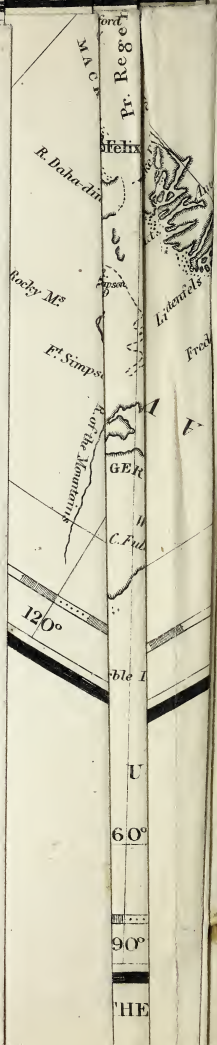
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VOYAGES

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DISCOVERY AND RESEARCH

WITHIN

THE ARCTIC REGIONS,

FROM THE YEAR 1818 TO THE PRESENT TIME:

UNDER THE COMMAND OF THE SEVERAL NAVAL OFFICERS EMPLOYED BY SEA AND LAND IN SEARCH OF A NORTHWEST PASSAGE FROM THE ATLANTIC TO THE PACIFIC; WITH TWO ATTEMPTS TO REACH THE NORTH POLE.

ABRIDGED AND ARRANGED FROM THE OFFICIAL NARRATIVES, WITH OCCASIONAL REMARKS.

BY SIR JOHN BARROW, BART., F.R.S.,
AN. ÆT. 82,
AUTHOR OF "A CHRONOLOGICAL HISTORY OF VOYAGES INTO THE ARCTIC REGIONS."

NEW YORK:
HARPER & BROTHERS, PUBLISHERS,
329 & 331 PEARL STREET,
FRANKLIN SQUARE.
1855.

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TO THE

OFFICERS, SEAMEN, AND MARINES,

WHO FOR SEVERAL YEARS HAVE BEEN EMPLOYED ON

VOYAGES TO THE ARCTIC REGIONS,

FOR THE SEARCH OF A NORTHWEST PASSAGE FROM THE ATLANTIC TO THE PACIFIC,

AND FOR THE ADVANCEMENT OF SCIENCE AND GEOGRAPHY,

AND WHO,

BY THEIR DEVOTED ZEAL, COURAGE, AND FORTITUDE, HAVE SUPPORTED THE HIGH CHARACTER OF

The British Navy,

THIS RECORD OF THEIR VALUABLE SERVICES

IS, WITH GREAT REGARD AND ADMIRATION,

INSCRIBED,

BY THEIR SINCERE WELL-WISHER,

JOHN BARROW.

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PREFACE.

If, by bringing forward the present volume, I shall have succeeded in affording gratification to those who are mainly the objects of it, my principal aim will be accomplished: in the compilation of it, I was influenced by the consideration that such an epitome was due to those whose persevering and adventurous exertions for the extension and improvement of science and geography have conferred a public benefit; but it did not escape me that something of this kind was also wanting, and might be acceptable, to supply the place of the official quarto volumes, whose costly size and decorations preclude them from the general and ordinary class of readers. By the copious details they embrace, in every branch of astronomical and nautical science, of geography, meteorology, and other physical researches—the charts and prints by which they are illustrated—they are made highly valuable to the man of science and taste, and well adapted for public libraries, or those generally found in the mansions of the wealthy; but they are not exactly suited for general circulation.

It was pretty much on the same grounds that, some years ago, when the renewal of the search for a Northwest Passage was set on foot, I was induced to bring out a small volume descriptive of the discoveries and exploits of our old "marine worthies" in the Arctic regions, commencing in the days of the Cabotas; the originals of which being confined, in like manner, to the huge folios of the old chroniclers, were very little known to the public at large. The object which I then had in view was to show briefly what had been accomplished by the former race of British naval officers and their hardy seamen, and, at the same time, to make their deeds more familiarly known to the existing race about to be employed on similar pursuits, and in the same regions of the globe.

A like view of setting forth to public notice the arduous services of our recent Arctic voyagers by sea and land—of endeavoring to appreciate their several characters and conduct, so uniformly displayed in their unflinching perseverance in difficulties of no ordinary description—their patient endurance of extreme suffering, borne without murmuring, and with an equanimity and fortitude of mind under the most appalling distress, rarely if ever equalled, and such as could only be supported by a superior degree of moral courage and resignation to the

Divine will—of displaying virtues like these of no ordinary cast, and such as will not fail to excite the sympathy and challenge the admiration of every right-feeling reader—has been the pleasing yet anxious object of the present volume.

Officers such as are herein mentioned are sure to create corresponding good seamen—by the establishment of regular discipline and good order—by judicious employment to prevent idleness and discontent—by allowing amusement and mirthful hilarity to divert the mind from despondency—and, above all, by attention to their wants and to their comforts—these are the means to inspire confidence and obtain obedience; and seamen so commanded and treated will never receive, because they will never require, any kind of corporal punishment.

The perilous incidents and adventures to which many, both officers and men, were necessarily exposed—the hopes and fears by which they were alternately excited—are so well and forcibly described in the several Journals of the former, that I have endeavored to preserve, as far as it could be done, their own respective statements in their own words, singly, or interwoven into the text of the present narrative.

The *physical* power of the navy of England has long been duly appreciated at home, also

by most foreign nations, and is matter of public record; its *moral* influence, though less the object of publicity, requires only to be more extensively known to be equally felt and esteemed; and nothing can be more conducive to this end than the results to be derived from voyages of discovery such as those under consideration, whose great aim has been the acquisition of knowledge, not for England alone, but for the general benefit of mankind.

It may be noticed that the present epitome is meant to convey the substance of six or seven large *quarto* volumes, with two or three smaller ones, containing together from three to four thousand pages, exclusive of four or five other volumes, consisting entirely of subjects in natural history, which on the present occasion do not fall within my province.

I can not but feel it a most gratifying reflection that, in so great a number of persons who have been employed and passed several winters in one of the most cold, dark, and desolate regions of the globe, so few lives, in some of the ships none, have been lost. It is equally gratifying to have the opportunity of recording, which I have not omitted to do, that most of those who survived the trial have received advancement in their professional career, or some distinction of honor, in reward of their services;

and that there are few of those in the inferior ranks who have not improved their condition in life, in consequence of their good conduct on very trying occasions.

I have used the liberty of making a few brief occasional remarks on some of the voyages, which I am sure the gallant conductors of them will take in good part, knowing, as they well do, the great interest I have felt in their success, from their commencement down to the existing expedition under the command of the gallant veteran, Sir John Franklin, whom, with his brave officers and men, may God preserve.*

* The two ships, "The Erebus" and "Terror," are the same that were employed, under the command of Sir James Clark Ross, on the Antarctic expedition, and the latter is the same ship that carried Back on the ice: on the present occasion they are commanded, officered, and manned as under:

The Erebus.	Terror.
Sir John Franklin, Captain.	Richard Crozier, Captain.
James Fitzjames, Commander.	Ed. Little, }
Graham Gore, } Lieutenants.	Geo. H. Hodgson, } Lieutenants.
Hen. T. D. Le Vesconte, }	John Irving, }
Jas. Wm. Fairholme, }	Frederic Hornby, } Mates.
Charles F. Des Vaux, }	Robert Thomas, }
Robert O. Sargent, } Mates.	Thomas Blanky, Ice Master.
E. Couch, }	G. A. Maclean, Second Master.
H. F. Collins, Second Master.	John S. Peddie, Surgeon.
Stephen S. Stanley, Surgeon.	Alex. M'Donald, Assist. Surgeon.
H. D. Goodsir, Assistant Surgeon.	J. H. Helpman, Clerk in Charge.
James Read, Ice Master.	11 Warrant and Petty Officers.
12 Warrant and Petty Officers.	57 Seamen and Marines.
58 Seamen and Marines.	68 Total.
70 Total.	

In recording the names of the above-mentioned officers, those of Captain Sir John Franklin and Captain Crozier require nothing farther to be said: that of Commander Fitzjames has been distinguished in the Euphrates, on the coast of Syria, and in China; and by his zeal and alacrity, his good humor and ever cheerful

disposition, he has made himself a universal favorite in the navy; and I am most happy to add that, in his absence, the Board of Admiralty have promoted him to the rank of Captain. Lieutenant Graham Gore served in the last fearful voyage of the Terror; and Lieutenant Fairholme was in the Niger expedition—excellent officers, both.

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DIRECTIONS FOR PLACING THE MAPS.

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W. Kemble, sc. N.Y.

Harper & Brothers, New York.

ARCTIC VOYAGES.

CHAPTER I.

INTRODUCTION.

So much has been said on the subject of a northwest passage from the Atlantic to the Pacific, and so many erroneous notions have been afloat concerning it, that I deem it proper, by way of introduction, to account for the recent revival of the attempts to discover it.

"Among the changes and vicissitudes to which the physical constitution of our globe is perpetually subject, one of the most extraordinary, and from which the most interesting and important results may be anticipated, appears to have taken place in the course of the last two or three years, and is still in progressive operation. The convulsion of an earthquake, and the eruption of a volcano, force themselves into notice by the dismay and devastation with which, in a greater or less degree, they are almost always attended; but the event to which we allude has been so quietly accomplished, that it might have remained unknown but for an extraordinary change which a few intelligent navigators remarked in the state of the Arctic ice, and the reports of the unusual quantities of this ice observed in the Atlantic."

The extract here quoted must, I believe, be laid at my door. The event alluded to was the disappearance of the whole, or greater part, of the vast barrier of ice which for a long period of time, perhaps for centuries, was supposed to have maintained its firm-rooted position on the eastern coast of Old Greenland; and its reappearance in a more southernly latitude, where it was met with, as was attested by various persons worthy of credit, in the years 1815–16 and 17; by ships coming from the East Indies and America; by others going to Halifax and Newfoundland; and in different parts of the Atlantic, as far down as the 40th parallel of latitude. Some of

these detached masses were of an unusual magnitude and extent, amounting in some instances to whole islands of ice, of such vast dimensions that ships were impeded by them for many days in their voyages; others were detached icebergs, from a hundred to a hundred and thirty feet above the surface of the water, and several miles in circumference. The Halifax packet reported that she had passed a mountain of ice nearly two hundred feet high, and at least two miles in circumference. A ship, belonging to the Old Greenland Missions, was eleven days beset on the coast of Labrador in floes of ice mixed with icebergs, many of which had huge rocks upon them, gravel, soil, and pieces of wood: in short, every account from various parts of North America agreed in stating that larger and more numerous fields and bergs of ice had been seen at greater distances from their usual places, in the years above mentioned, than had at any time before been witnessed by the oldest navigators. The fact, therefore, might be considered as too well authenticated to admit of a doubt.

It was at once concluded from whence the greater part of these immense quantities of ice were derived. In a letter from Mr. Scoresby the younger, an intelligent navigator of the Greenland seas, to Sir Joseph Banks, he says, "I observed on my last voyage (1817) about two thousand square leagues (eighteen thousand square miles) of the surface of the Greenland seas, included between the parallels 74° and 80°, perfectly void of ice, all of which had disappeared within the last two years." And he farther states, that, although, on former voyages, he had very rarely been able to penetrate the ice, between the latitudes of 76° and 80°, so far to the west as the meridian of Greenwich, on his last voyage he twice reached the longitude of 10° west; that in the parallel of 74° he approached the coast of Old Greenland; that there was little ice near the land; and he added, "that there could be no doubt that he might have reached the shore had he but a justifiable motive for navigating an unknown sea at so late a season of the year." This account was fully confirmed by intelligence received at Copenhagen from Iceland in the year 1816, that the ice had broken loose from the opposite coast of

Greenland, and floated away to the southward, after surrounding the shores of Iceland, and filling all the bays and creeks of that island; and that this afflicting visitation was repeated in 1817—circumstances hitherto unknown to the oldest inhabitant.

About the same time, the whale ships that frequented the fishery in Davis's Straits, and the Hudson's Bay traders, experienced an unusual number of icebergs and large floes of ice drifting to the southward down the straits and along the coast of Labrador, and past Newfoundland; yet as to a certain extent those masses of ice were of frequent occurrence in these quarters, and occasionally met with in the Atlantic, it was those from the eastward that attracted particular notice.

Whatever the cause may have been for the disruption of this immense barrier of ice from the eastern coast of Greenland, whether by its own weight after centuries of accumulation, or from the partial disruption of the coast itself, the fact is unquestionable; and the notoriety of it given in the several journals of Europe, and more especially in those of England, corroborated by various private communications, was among the circumstances which, combined with others, gave rise to the revival of those voyages of discovery for attempting a passage round the northern coast of America to the Pacific Ocean, and also to another attempt to reach the North Pole, by proceeding between the east coast of Greenland, now freed from ice, and the west coast of Spitzbergen, generally not much hampered with ice. A naval officer, the narrator of one of the very first of the modern expeditions, which the change in the ice of the northern seas mainly occasioned, opens his account of it as follows:

"It most opportunely occurred, in the year 1817, that accounts of a change in the Polar ice particularly favorable to the undertaking were brought to England by our whale ships; and as it has generally happened in this country that some individual, more sanguine than the rest of the community, has, by his superior knowledge, greater exertions, or more constant perseverance, succeeded in bringing a project to bear, which, in less vigorous or pertinacious hands, would have been suffered to die away, this favorable change was turned to so good an account by an influential member of the government, and whose name is inseparable from northern dis-

covery, that, in the following year, his Majesty George IV., then Prince Regent, was pleased to command that attempts should be made to reach the Pacific, both by the western route through Baffin's Bay, and by a northern course across the Pole."*

It would be ridiculously squeamish to affect ignorance to whom the compliment in the above passage is meant to apply, and the more so as, on the whole, it is true. I am fully prepared to admit that part which relates to the "sanguine individual" who succeeded by "exertions" and "perseverance" in bringing the project to bear—a project which, like most others that are new and not well understood, could not, and therefore did not, fail to bring with it censorious remarks, and ill-natured but ignorant criticisms from one party, with a modicum of praise and approbation from another—as usual, *laudatur ab his, culpatur ab illis.* Previously, however, to originating any proposals for the voyages herein treated of, no pains were spared in collecting whatever information could be gathered from the expeditions of our old travelers, the traders in the service of the Hudson's Bay and the Northwest Companies, from scattered remarks of whale fishers and casual travelers, such as Hearne and Mackenzie: and the information thus gained was submitted to the public at the time the first of the recent expeditions was in progress.†

I did not, however, stand alone, having had the good fortune to meet with every encouragement from an able coadjutor, one ever ready to hold out a helping hand when the promotion of science and general knowledge was the object. This patron was Sir Joseph Banks. Before, therefore, I submitted any proposal to Lord Melville, which I knew would be referred to the President and Council of the Royal Society, as all voyages of discovery connected with science were, I thought it right to take the president's opinion as to the effect of the changes reported to have occurred in the northern regions, in which I was aware he took a particular interest, having himself, in early life, visited Iceland and climbed to the top of Mount Hecla; and as he knew

* Beechey's Voyage toward the North Pole.
† Chronological History of Voyages into the Arctic Regions, &c.

that I had also, in early life, paid a visit to the Spitzbergen seas, as high as Hakluyt's Headland, near the 80th parallel, I was sure of engaging his attention on the subject, and was not disappointed. He entirely approved of the renewal of attempts to accomplish a grand object which for three centuries had, at different times, occupied the attention of our sovereigns, philosophers, men of science, and merchants; and he promised to look over and give me any information that his own correspondence might furnish: "I may be able," he said, "to name those from whom you may receive, and books from which you may derive the information you are in quest of, but for science I must refer you to my council."*

Accordingly, I submitted a plan to Lord Melville, then First Lord of the Admiralty, a nobleman at all times ready to attend to any suggestion that had for its object the improvement of science or the interests of navigation and commerce. It was sent, as usual, to the President and Council of the Royal Society, returned with their approval, and submitted to Lord Liverpool, then Prime Minister, for his sanction; and this being obtained, orders were forthwith issued by the Board of Admiralty for the preparation of four ships to be appropriated to the service in question—two for the search of a passage from the Atlantic to the Pacific, and two to proceed from the sea of Spitzbergen toward the North Pole.

It may be observed, that none of our old navigators were able to penetrate any part of the Polar Sea; all their discoveries were confined to the straits, and inlets, and islands on the eastern coast of America, and the large straits of Davis and Baffin on the western coast of Greenland. Had Baffin entered Lancaster Sound from his own strait, he would at once have discovered the sea which communicates with the Pacific, and then there is no saying what this able old navigator and his contemporaries might not have effected. Indeed, at the commencement of the late Arctic voyages, nothing was known

* Great Britain has seldom neglected to pay a tribute to the memory of men who have distinguished themselves by their zeal for the promotion of science and the arts; to which end Sir Joseph Banks has largely contributed, personally and by his purse; yet not even a biographical sketch that I know of has been published. Let Sir Edward Knatchbull and the person to whom he gave the materials look to this.

of any entrance into the Polar Sea from this side of America. All that was known on the first attempt, which hardly deserves the name, was, that a Polar Sea did exist, that the ships of Captain Cook had looked at it through Behring's Strait, and that Hearne and Mackenzie, two North American travelers, had arrived at the northern shore of North America, at different points and at different times, and reported, somewhat doubting, that they had seen the sea.

From these circumstances, and, more particularly, from the undoubted authorities I had succeeded in collecting, it was quite clear that a current was constantly found setting down Davis's Strait, and the Strait of Hudson's Bay, and also along the shore of Spitzbergen, all to the southward; no doubt, therefore, could remain on my mind, that there must be a water communication between the seas of the Pacific and the northern Atlantic; that the water supplied through the Strait of Behring (a well-established fact) into the Polar Sea was discharged, by some opening or other yet to be discovered, into the Atlantic. The "Edinburgh Review," however, turned into ridicule the idea of a Polar Basin; and others endeavored to show that, if these currents existed, they must be very temporary or occasional, as they would otherwise drain this Polar Basin of its water.

It may be worth the while, now that the shores of this Polar Sea have been visited and surveyed, one part of them by our own navigators, and the Asiatic part by the indefatigable Baron Wrangel and others, to show to these would-be-wise gentlemen what that sea really is—what are its inpourings, its outpourings, and its dimensions. In the first place, it is an immense basin of water, included by the shores of Asia, of Europe, and of America. Of Asia, from Nova Zembla, in 50° E. long^{e}., to East Cape in Behring's Strait, in 170° W. long^{e}.; that is, 140° extent of coast. In Europe, from Nova Zembla, in 50° E., to Baffin's Bay, about 70° W., an extent of coast equal to 120°; and in America, from the last point, 70° W., to Cape Prince of Wales, 168° W., in Behring's Strait, an extent of coast equal to 100°. These, including the opening of Behring's Strait and that between Greenland and Spitzbergen, comprise the

whole circle of 360°, an extent of coast which no other detached sea in the world can boast of. It is a circle of two thousand four hundred geographical miles in diameter, and seven thousand two hundred miles in circumference, considering the latitude of 70° to be the average boundary line, which it nearly is, by taking the inlets of the land to balance the outlets of the sea. And, in order to satisfy the malcontents regarding the currents exhausting its waters, it may, perhaps, be sufficient to state what are its supplies. They consist of the constant influx of a stream through Behring's Strait, of five or six great rivers from Asia—the Obi, the Jenisci, the Lena, the Indigirka, and the Kolima. Europe supplies the waters of the Dwina, with numerous streams from the coasts of Norway and Lapland, and the eastern coasts of Greenland, and western coast of Baffin's Bay; and America pours in several copious streams from the Rocky Mountains, with the Mackenzie, the Hearne, or the Copper Mine, the Back, and several other minor streams. To talk, therefore, of its being exhausted by the southernly currents appears to be absolute nonsense.

The main object intended to be attained by the first of the recent expeditions was to discover an entry from the eastern side of America into the Polar Sea. But it was not done by the first, as it ought to have been done; and, as the second most readily accomplished it, and, moreover, navigated one half of that sea to the westward, why, then, it may be asked, have future attempts failed to navigate the other half? The answer is easy enough—they failed by deserting the direct path, that gave them half the passage toward Behring's Strait, and tried various new ways in search of openings into the Polar Sea, and found but one other on the whole eastern coast of America, and that one not navigable. The old route of Parry through Lancaster Sound and Barrow's Strait, as far as to the last land on its southern shore, and thence, in a direct line, to Behring's Strait, is the route ordered to be pursued by Franklin.

But it may also be asked, as it has been asked by some of that class known by the name of Utilitarians, *cui bono* are these northern voyages undertaken? If they were merely to be prosecuted for the sake of making a passage

from England to China, and for no other purpose, their utility might fairly be questioned. But when the acquisition of knowledge is the groundwork of all the instructions under which they are sent forth; when the commanding officer is directed to cause constant observations to be made for the advancement of every branch of science—astronomy, navigation, hydrography, meteorology, including electricity and magnetism, and to make collections of subjects in natural history—in short, to lose no opportunity of acquiring new and important information and discovery; and when it is considered that these voyages give employment to officers and men in time of peace, and produce officers and men not to be surpassed, perhaps not equalled, in any other branch of the service, the question *cui bono* is easily answered in the words of the minister of Queen Elizabeth, "Knowledge is Power," the truth of which was practically demonstrated to the grumblers of that day by the following results.

Sir Humphrey Gilbert, in consequence of his grant of the Island of Newfoundland, made a voyage thither, on his return from which he nobly perished; but his knowledge did not perish with him: it laid the foundation of that valuable cod-fishery which still exists. Davis, by the discovery of the strait that bears his name, opened the way to the whale-fishery, which still continues to flourish; and Frobisher pointed out the strait which conducted Hudson to the bay that bears his name, and which gave rise to the establishment of a company of merchants, whose concerns are of such an extensive nature as to be carried on across the whole continent of America, and to the very shores of the Polar Sea; and already, in our time, the opening of Lancaster Sound by Parry has extended the whale-fishery into that sound.

But the knowledge that has resulted from these later voyages is not less valuable, less durable, or more evanescent, nor can it be too highly appreciated. Let any one cast an eye only over the best charts of the northern regions, previous to the recent Arctic expeditions, and compare them with what they now are. Let him inquire what was then known or described of that Polar sea, or indeed of the whole northern shore of the

American continent, and the answer will be, a blank; which, however, he will now find filled up. Let him ask what was the value or amount of the geographical and physical knowledge then possessed of the regions of the globe within the Arctic circle, and the reply would be, little or nothing; whereas the objects of Nature which the late voyages have furnished to the British Museum and other depositories are numerous and novel. Let any one turn over that extraordinary collection of engravings and descriptions of subjects in every department of natural history, filling up no less than four large *quarto* volumes, whose general titles are as under:

1. *The Fauna Boreali-Americana.*—Quadrupeds;
2. *The Fauna Boreali-Americana.*—Birds;
3. *The Fauna Boreali-Americana.*—Fishes;
4. *The Fauna Boreali-Americana.*—Insects;

containing from three to five hundred pages each, and all brought forward by, and under the superintendence of, Dr. Richardson, the fellow-traveler of Sir John Franklin, and the man to whose energy, courage, and skill Sir John has declared that he and the whole party owe their safety and their lives. Let these accessions to general knowledge have only their due weight, and they will then be duly appreciated.

The value of the scientific observations and discoveries made in these Arctic voyages, independent of all national and selfish considerations, *is* duly appreciated on the continent of Europe and in America. It is, perhaps, not generally known that the late voyage toward the South Pole, under the command of Captain (now Sir James) Ross, had no other object but the advancement of science and general information regarding the Antarctic regions of the globe; and that among the first subjects to be attended to was that of making a series of observations on terrestrial magnetism, a subject which has of late years assumed so important a character, by its influence on the globe, that the government of Great Britain, ever ready to take the lead in matters connected with science, has been induced to establish magnetic observatories in several of its colonies, distant from each other; and, by influence and example, has prevailed on other powers to do the same, the object being to conduct

simultaneous observations, at given stated times, in all of them. Those of Great Britain are sent to Lieutenant-colonel Sabine, who has kindly undertaken to reduce them systematically.* When Franklin's expedition was decided on, Colonel Sabine was asked whether magnetic observations made on the Polar Sea, and registered in the same manner as in the colonial observatories, would not be of service? His reply was, "That he has no hesitation in saying that the attempt to make the northwest passage would render the most important service that now remains to be performed toward the completion of the magnetic survey of the globe." I shall only add here that the President and Council of the Royal Society, Sir Edward Parry, and Captain Beaufort strongly approve of the existing, and perhaps the last, attempt to make the passage through the Polar Sea into the Pacific. But what says Sir John Herschel, when speaking of the atmospheric pressure in cold climates? "This, with the magnetic survey of the Arctic seas, and the not improbable solution of the great geographical problem which forms the chief object of the expedition, will furnish a sufficient answer to those, if any there be, who regard such voyages as useless. Let us hope and pray that it may please Providence to shield him (Franklin) and his brave companions from the many dangers of their enterprise, and restore them in health and honor to their country."

To those who are disposed to doubt the expediency, "if any there be," of the present voyage under Sir John Franklin, I shall state one additional motive for having adopted it, which is this: that to have abandoned any farther attempt to fulfill an object which has never ceased to occupy the attention of the British government since the days of our Elizabeth, and more especially, at this particular time, to have left it to be completed by a foreign navy, after the doors of the two extremities of the passage had been thrown open by the ships of our own, would have been little short of an act of national suicide; or, to say the least of it, an egregious piece of national folly. In personal courage the British navy has long held

* The observations made at Toronto have already been reduced and printed with an admirable and well-written preface by the colonel.

a proud pre-eminence in time of war, and numbers of her officers have no less distinguished themselves, in times of peace, for moral courage and mental fortitude. It would, therefore, have been an unpardonable omission to have suffered any paltry financial considerations to have interfered with the employment of a couple of small barks for the attainment of an object of such importance.

Let those, then, who may be disposed to quarrel with the existing expedition on the score of expense, be assured that, in putting it forth, it was not overlooked that, at the moment, there were two foreign fleets in the Pacific, belonging to the only two naval powers likely to engage in the enterprise under consideration, and to either of whom it would afford a moral triumph to accomplish what we had begun but shrunk from completing. This is no chimera. The shortest passage for any of the homeward-bound ships of these two powers now in the Pacific is through the Polar Sea.

Franklin is now on his voyage, and whether he succeeds in making good the passage or not, nothing, I am most certain, will be wanting on his part, or on that of his gallant comrades, to accomplish all that human means and human intellect can command. In the sentiments with which this brave, veteran seaman closes the narrative of his second Polar voyage I most cordially concur, as I am inclined to think most of those who read it will likewise do:

"Arctic discovery has been fostered principally by Great Britain; and it is a subject of just pride that it has been prosecuted by her from motives as disinterested as they are enlightened; not from any prospect of immediate benefit to herself, but from a steady view to the acquirement of useful knowledge, and the extension of the bounds of science. Each succeeding attempt has added a step toward the completion of northern geography; and the contributions to natural history and science have excited a general interest throughout the civilized world. It is, moreover, pleasing to reflect that the loss of life which has occurred in the prosecution of these discoveries does not exceed the average number of deaths in the same population at home under circumstances the most favorable. And it is sincerely to be hoped that Great Britain will not relax her efforts until the question of

a northwest passage has been satisfactorily set at rest, or, at least, until those portions of the northern shores of America which are yet unknown be laid down in our maps, and which, with the exception of a small space on the Asiatic continent eastward of Shelatskoi Noss, are the only intervals wanting to complete the outline of Europe, Asia, and America."—P. 319.

And I can not but feel a proud gratification, which I am sure is shared by every true Englishman of whatever rank in society, in the perusal of the following honest and manly sentiments with which Captain Sir Edward Parry closes the narrative of his third voyage into the Arctic seas:

"Happy as I should have considered myself in solving this interesting question, instead of still leaving it a matter of speculation and conjecture; happy shall I also be if any labors of mine, in the humble, though it would seem necessary office of pioneer, should ultimately contribute to the success of some more fortunate individual; but most happy should I again be to be selected as that individual. May it still fall to England's lot to accomplish this undertaking; and may she ever continue to take the lead in enterprises intended to contribute to the advancement of science, and to promote, with her own, the welfare of mankind at large! Such enterprises, so disinterested as well as useful in their object, do honor to the country which undertakes them, even when they fail: they can not but excite the admiration and respect of every liberal and cultivated mind; and the page of future history will undoubtedly record them as every way worthy of a powerful, a virtuous, and an enlightened nation."—P. 186.

CHAPTER II.

COMMANDER JOHN ROSS.

1818.

A Voyage of Discovery in his Majesty's ships Isabella and Alexander for the purpose of exploring Baffin's Bay, and inquiring into the probability of a Northwest Passage. By JOHN ROSS, K.S., *Commander.*

THE two ships appropriated to this service were the Isabella, 385 tons, and the Alexander, 252 tons, commanded, officered, and manned as under:

ISABELLA.	ALEXANDER.
John Ross, Commander, commanding the Expedition.	W. E. Parry, Lieutenant commanding.
William Robertson, Lieutenant.	H. P. Hoppner, Lieutenant.
William Thom, Purser.	W. H. Hooper, Purser.
John Edwards, Surgeon.	Alexander Fisher, Assistant Surgeon.
C. J. Beverley, Assist. Surgeon.	Ph. Bisson, Adm. Midshipman.
J. M. Skene, Adm. Midshipman.	John Nias, do. do.
J. C. Ross, do. do.	John Allison, Greenland Master.
J. Bushnan, Midshipman and Clerk.	Joseph Phillips, do. Mate.
Benj. Lewis, Master and Greenland Pilot.	James Hulse, Clerk.
Thos. Wilcox, Mate and Greenland Pilot.	9 Officers.
10 Officers.	3 Carpenter, Cook, Sailmaker.
3 Carpenter, Sailmaker, Cook.	3 Leading Men.
4 Leading Men.	17 Able Seamen.
31 Able Seamen.	5 Marines.
6 Marines.	37 Whole complement.
54 Whole complement.	
Supernumeraries.	
1 Captain Sabine, Royal Artillery.	
1 Sergeant. do.	
1 Esquimaux, Saccheous, or Sackhouse.	
57 Total on board.	

When looking out for proper persons to command the intended expedition, Sir George Hope, who had been flag-captain to Sir James Saumarez, and then a Lord of the Admiralty, recommended *Commander Ross* as an active and zealous officer, and well practised in the ordina-

ry duties of the seaman's profession. The ordinary duties of a good seaman are well known; that he can hand, reef, steer, and heave the lead, keep the dead reckoning, and take and work an observation for the latitude; how much beyond this Sir George does not appear to have pledged himself. Indeed, Ross states somewhat modestly, in his introduction, "My nautical education has taught me to act, and not to question; to obey orders as far as possible, not to discuss probabilities, or examine philosophical or unphilosophical speculations. I have here attempted nothing beyond the journal of a seaman; if I had done more, I might have done worse."

Now something beyond the general character given by Sir George Hope was required from an officer who ventured to accept the command of an expedition for the purposes of enlarging the wide field of science and discovery, and moreover for that of a peculiar discovery; one that had baffled the skill of the most able and persevering navigators for a period at intervals of more than three hundred years. It has been truly observed, that "this is a service for which all officers, however brave and intelligent they may be, are not equally qualified; it requires a peculiar tact, an inquisitive and persevering pursuit after details of fact, not always interesting, a contempt of danger, and an enthusiasm not to be damped by ordinary difficulties."

In fact, Commander Ross's services, previous to this voyage, were only adapted—as Sir George Hope, and, indeed, he himself has stated them—to qualify for the ordinary duties of a good seaman; but least of all, as will be seen, for conducting a voyage of discovery. "In the year 1786," he says, "I entered the royal navy; continued in it for four years; was in the merchant service till 1794; in the East India Company's service till 1799; then returned to the navy; acting lieutenant of the Weasel, of the Clyde, &c. Went with Lord de Saumarez as midshipman, often acting lieutenant, but ranked only as midshipman; confirmed as lieutenant in 1805; served as first lieutenant in three different ships; promoted commander in 1812, and commanded three different ships."* He might have

* His examination before a Select Committee of the House of Commons on the Arctic Sea Expedition.

added, never served out of the Baltic and the White Sea, except once, on the north coast of Scotland.

Now it may broadly be stated that Commander Ross, by his own showing, did not at all answer the description of an officer fitted for the present service; and his acts and his book prove it. His patron who recommended him was himself a thorough-bred seaman, an honest, straight-forward, and downright* officer, and sincerely believed, no doubt, that the person he named was an active and zealous officer "in the ordinary duties of his profession;" but there is reason to believe that, in offering him the command of a Voyage of Discovery, he had not given due consideration to the qualifications that such a command required.

Lieutenant Parry, who commanded the Alexander, served several years on the coast of North America, where he was distinguished as an excellent navigator, theoretical as well as practical. He drew up a little treatise, especially for the use of the young officers of the fleet, on nautical astronomy, containing directions for finding the principal fixed stars visible in the northern hemisphere. A copy of this, with the necessary drawings, being sent to his father, Dr. Parry, of Bath, he had it printed. While employed in America, led by a spirit of enterprise, he volunteered for, and was appointed to, the Congo expedition under Captain Tuckey, but fortunately could not join in time. Still, however, his attention was drawn toward African discovery, and about the close of 1817 he wrote to a friend, detailing his views on the subject; and just as he had finished his letter, a paragraph in a newspaper, alluding to the attempt about to be made for the discovery of a northwest passage, caught his eye, and he added a postscript, referring to this, and said "he was ready for hot or for cold"—Africa or the Polar regions. His friend took this letter to the Secretary of the Admiralty,† which Parry says he had reason to believe was the immediate cause

* The word reminds one of a very significant *sobriquet* on Admiral Sir James Saumarez, Flag-Captain Sir George Hope, and the Ship's Captain Dumaresq—the three designated as *up-right*, *down-right*, and *never-right*.

† Mr. Barrow, who was so much pleased by the letter, and the little treatise which accompanied it, that he at once submitted to Lord Melville his opinion, that he was just the man for such an appointment.

of his appointment to that expedition, then preparing for the latter object.

Lieutenant Parry, it may safely be said, did not disappoint the expectations of those who recommended him; but he was himself grievously disappointed at the manner in which the voyage in question was conducted, and at the total want of facilities given for collecting such a body of observations on various subjects of scientific inquiry, of geographical information, and, above all, at the careless manner in which every attempt, or, rather, want of attempt, was slurred over to fulfill the instructions of government. Owing to this, instead of being able, on their return to England, to produce any results worthy of the liberality with which the expedition had been fitted out, there was not an officer in either ship that did not express mortification and disappointment.

Lieutenant Robertson was an active and intelligent officer, a good observer and surveyor; and Lieutenant Hoppner, son of the artist, an excellent draughtsman. One of the midshipmen, J. C. Ross, a young man of the most active and willing disposition, has subsequently been employed in every Arctic expedition, commanded the recent Antarctic voyage of three years, and is now Captain Sir James Clarke Ross, married, and enjoying the fruit of his valuable and highly praiseworthy labors. His name will frequently occur.

Captain Sabine, of the Royal Artillery, well known for his scientific acquirements, and for the knowledge and use of mathematical and astronomical instruments, being desirous of the opportunity of putting his skill into practical experience, was requested to join the expedition as a volunteer, and, like the rest, had but too much cause to be disappointed and aggrieved. An account of his subsequent and valuable labors, however, will hereafter find a place in the present narrative.

It would have been more agreeable, in the outset of the present volume, to have passed over this first voyage of discovery in the Arctic regions, than to be obliged to notice it under a feeling of disappointment, which the perusal of it so unavoidably and so provokingly creates; but as it constitutes the first link in the chain of the interesting publications in question, it could not with

propriety have been omitted, though it can afford little pleasure to pass censure where there is every desire to praise. In matters of fact, however, like the present, the truth must be spoken; and it may be proper and only due justice to state at once that no blame can possibly attach to any individual in the two ships for any misstatements, negligence, or lack of information which may occur in the original narrative; that all appear to have been anxious to effect whatever could be accomplished to meet the views of government, as far as the few opportunities given to them would allow. At the same time, it is possible that some of the omissions may have happened from a misconception of what was required of the commander, and from the novelty of the service, in the nature and peculiar duties of which he had now obviously for the first time been engaged; and it is so far due to him to admit, farther, that the appointment was not of his own seeking, but was voluntarily offered to him by one who, it would seem, was as little acquainted with the peculiar service as was Mr. Ross himself.

On the 18th of April the ships left the river, arrived at Lerwick on the 30th, and on the 1st of June were somewhere on the eastern side of Davis's Straits; proceeded slowly between the ice and the western shore of Greenland, passing a number of whale ships busily employed, and on the 17th of June got into Waygat Strait, in which were forty-five whalers detained by the ice. This strait is formed between the shore of Greenland and the Island of Disco, on which is a Danish settlement. In this neighborhood, among the points of land, the shoals, and islands that abound, the ships were so hampered with ice, that it was not until the 3d of July they reached the Women's Islands.

Their detention, however, did not lack amusement. The half-caste sons and daughters of Danes and Esquimaux danced Scotch reels on the deck of the Isabella with the sailors; and Ross says:

"Sackhouse's mirth and joy exceeded all bounds, and with good-humored officiousness he performed the office of master of the ceremonies. An Esquimaux master of the ceremonies to a ball on the deck of his majesty's ships in the icy

seas of Greenland was an office somewhat new, but Nash himself could not have performed his functions in a manner more appropriate. It did not belong even to Nash himself to combine in his own person, like Jack, the discordant qualifications of seaman, interpreter, draughtsman, and master of ceremonies to a ball, with those of an active fisher of seals and a hunter of white bears."—P. 55-6.

This intelligent and amiable Esquimaux, Jack Saccheous (or Sackhouse), affords a strong example of what a little kindness and attention will effect on human beings, even in the lowest scale of existence. Of the history of this young man there will be occasion to speak hereafter.

On the fitting out of the present expedition, Captain Basil Hall, finding that Saccheous had a wish to join it, made his desire known at the Admiralty, and he was accordingly appointed interpreter, in which capacity he proved exceedingly useful in the very limited opportunity that occurred of holding any communication with his native countrymen. Among the mirthful group before mentioned, Ross tells us:

"A daughter of the Danish resident, about eighteen years of age, and by far the best looking of the group, was the object of Jack's particular attentions; which being observed by one of our officers, he gave him a lady's shawl, ornamented with spangles, as an offering for her acceptance. He presented it in a most respectful and not ungraceful manner to the damsel, who bashfully took a pewter ring from her finger and presented it to him in return; rewarding him, at the same time, with an eloquent smile, which could leave no possible doubt on our Esquimaux's mind that he had made an impression on her heart."—P. 56.

After some delay the wind changed, and the ice began to separate, leaving an opening along the coast; but Jack, who had gone on shore with his countrymen, had not returned. A boat was therefore sent to bring him off; but the poor fellow was found in one of the huts with his collar-bone broken, having, under the idea, as expressed by himself, of "*plenty powder, plenty kill*," overloaded his gun, and the violence of the recoil had caused the accident.

In proceeding northernly, the expedition came up with

several groups of whalers that had passed through the floes of ice, in one of which it was also shortly after beset, in latitude 75° 35′, "the Dexterity whaler now alone continuing in sight." Yet, in the same page, Ross says, "We are now arrived at a point between which and Cape Dudley Digges land had not been seen by former navigators;" as if whale-fishers were excluded from the class of navigators. He then goes on to say, that "between latitude 75° 12′ and 76° the shore formed a capacious bay, in the midst of which rose a remarkable spiral rock; this I named Melville's Monument, in grateful remembrance of the late viscount, from whom I received my first commission. To the bay itself I gave the name of Melville's Bay, from respect to the present First Lord of the Admiralty. It is situated between 75° 12′ and 76°, and abounds with whales, many of which were taken by the ships that were persevering enough to follow us."

And no doubt numbers of whalers, for ages before this, had persevered in their search of whales far beyond the latitude of 76°; but the expedition being one for the purpose of discovery, something new, it would seem, was to be struck out at this early period, while on the Greenland side of Baffin's Bay—a coast which could afford nothing connected with the Polar Sea or with the northwest passage. In point of fact, Ross, on the outset of the voyage, even in the title-page, misstates (he could not mistake) the object of his instructions. He says the voyage was made "for the purpose of exploring Baffin's Bay." Now there is not a word in the instructions about exploring Baffin's Bay; he was to stand well to the northward before crossing over to the westward, but not to stop on either coast: "the first and most important object of this voyage is to be the discovery of a passage through *Davis's Straits*, along the northern coast of America." On the western coast there could be no passage into the Polar Sea, nor toward the coast of America.

Opportunely, however, an event occurred which afforded him an occasion, if not an excuse, for delay. On the 10th of August eight sledges, drawn by native Esquimaux, were observed advancing toward the place

where the ships were at anchor, and Saccheous was dispatched with a white flag and some presents to hold a parley with them, they being placed at one side of a canal or chasm in the ice, and he on the other side. After loud shouts, words, and gestures, Saccheous soon perceived that their language was the same as his, but of a different dialect, and, holding up his presents, he called out, "Come on;" but the reply was, "No, no; go away." And one of them, approaching the edge of the canal, repeated, "Go away; I can kill you," holding up a knife. Saccheous threw over an English knife, saying, "Take that." This they picked up, shouted, and *pulled their noses*. Saccheous, in return, called out *Heigh-yaw! pulling his nose* with the same gesture.

This pulling of noses, which is represented to be their mode of a friendly salutation, is a trite matter of little moment, and would not be mentioned here but for the singular circumstance, which has been told by several of the officers, and in print, that they never saw nor heard of it till it was mentioned by Commander Ross, for the first time, at Shetland, on their return home. It is scarcely possible that such a foolish ceremony, if frequently and solemnly repeated, could have escaped the notice of all the officers except that of the commander; yet there must be something in it, for Back, in his Arctic journey, mentions *rubbing of noses* as an Esquimaux salutation.

The following is somewhat curious, considering the number and frequency of whalers visiting this part of the coast, where no doubt much intercourse must have taken place between them and the innocent natives: Ross says they soon became more familiar, and, pointing to the ships, eagerly asked, "What great creatures these were? Do they come from the sun or the moon? do they give us light by night or by day?" repeating the question, "What were they?" to which Saccheous replied, "They were houses made of wood." They responded "No: they are alive; we have seen them move their wings." More enlightened than these Arctic Highlanders (for so Ross calls them) did the messengers of Montezuma, on the arrival of the ships of Cortez, in like manner eagerly inquire,

> "What divine monsters, oh ye gods, are these,
> That float in air, and fly upon the seas!
> Come they alive or dead upon the shore?"* &c.

Saccheous, it seems, succeeded at last, "by many arguments, to persuade them that he was flesh and blood;" and the most courageous "ventured to touch his hand, then pulling himself by the nose, set up a shout, in which he was joined by Saccheous and three others." But enough of this, which runs through eighteen or twenty pages, followed by a whole chapter of twenty more, which, considered under all circumstances, would be amusing enough, did it not prepare the reader for suspicion as to its accuracy, as well as of many other statements subsequently recorded in the book. The titles of this extraordinary chapter are: "*The Situation of the Arctic Highlands—Nature of the Country—Produce of the Country—Language of the Arctic Highlanders—Origin of the Arctic Highlanders—Dress—Description—Subject of Religion—Mode of Living, and Customs—Habits and Customs.*" Ross, indeed, suspects that this account "may appear in some points to be defective;" he may safely satisfy himself that it will not only *appear*, in some points, to be *defective*, but will be so pronounced in all: in point of fact, he never set his foot on shore, and could not, by any possibility, have known any thing of the stuff he has set down, which is of that kind of manufacture not worth the paper on which it is printed. Most readers will agree with the writer in a popular journal, who calls it "a bill of fare like that of the landlord in the play—all the good things are stuffed into the bill, while nothing is found in the larder."

Ross may certainly plead examples without number, in the books of modern travelers, wherein imagination has very materially assisted in supplying the details; but something approaching to *fact* is expected in a voyage like the present, as any deviation, even in a trifling subject, is apt to throw a doubt on those of greater moment. No doubt, however, can be entertained of the discovery of a physical object (not new, however) found on the cliffs of this part of the coast of Baffin's Bay, not far from Cape Dudley Digges. "We now discovered,"

* Dryden's Emperor of Mexico.

says Ross, "that the snow on the face of the cliffs presented an appearance both novel and interesting, being apparently stained or covered by some substance which gave it a deep crimson color. This snow," he adds, "was penetrated even down to the rock, in many places to a depth of ten or twelve feet, by the coloring matter." Mr. Fisher says, "It is worthy of remark, that this coloring matter, be it what it may, does not penetrate more than an inch or two beneath the surface of the snow."

Many conjectures, of course, were afloat concerning the cause of so unusual an appearance; but Ross says, "it was at once determined it could not be the dung of birds;" rather a hasty conclusion, for Mr. Brande the chemist, to whom it was first submitted on the return of the expedition, for the purpose of being analyzed, having detected uric acid, pronounced it at once to be the excrement of birds. It was the general opinion of the officers, who examined it with the microscope, that it must be vegetable; and in this opinion Dr. Wollaston concurred, after a minute examination both by the microscope and chemical tests—yet *he* even had his doubts. Mr. Brown, the celebrated botanist, conjectured it might be derived from some of the algæ, confervæ, or tremellæ (*Tremella cruenta*); the more probable, as the roots of the moss (a species of *Polytricum*), common on these cliffs, are deep scarlet—deep, indeed, must they be to sanction the outrageously exaggerated print of these crimson cliffs, as colored in the volume. There is nothing new, however, in the discovery of red snow. Pliny and other writers of his time mention it; Saussure found it in various parts of the Alps; Martin found it in Spitzbergen, and no doubt it is to be met with in most alpine regions.

A little farther on, the ships were visited by three other Esquimaux, from whom information was received that the iron part of their knives was found on a mountain in great masses, and that it was a part of the mountain; that in other places it was found in solid pieces on the surface, and that they cut it off with hard stone. Ross, however, could not succeed in obtaining any of the masses; but a small piece, being examined in England, was found to contain the usual proportion of nickel met with in meteoric stones.

Having now passed Cape Dudley Digges, which Ross found to be a few miles to the southward of the situation in which Baffin has laid it down, Wolstenholme Island came in sight to the northward; and, "as we were steering for it with a fine breeze, and the sea almost clear of ice, we gave up all idea of communicating with the *King of the Arctic Highlanders*; the hopes of attaining the grand object of the enterprise were now raised to such a height as to make that, which was considered so desirable but a few hours before, an object of no moment whatever." It was, indeed, quite time to think of the "grand object," and leave behind that "so desirable one"—the king of a miserable tribe of Esquimaux—the year having advanced to the 18th of August, and the "enterprise" being no farther advanced than to the western coast of Greenland, on which coast by no possibility could a passage be found. Something more, however, than the scanty geography, which Baffin alone has afforded us, would, no doubt, have been desirable even on this coast of Greenland.

He tells us that Wolstenholme Sound was completely blocked up with ice; but if any faith is due to his own chart, he must have passed it at the distance of forty miles at least. "This sound," he says, "seemed to be eighteen or twenty leagues in depth;" and if so, by his own account he must have seen the bottom of it, though that was a point distant from the ship at least a hundred miles; but he had previously prepared his readers for a long sight, having assured them that, in these Arctic regions, they were often able to see land at an immense distance; and, farther, that "we have certain proof that the power of vision was extended beyond one hundred and fifty miles!"—(P. 143.) Thus he says, "We found the entrace to this inlet" (Wolstenholme, when forty miles off) "and the general form and appearance of the land to agree extremely well with the description given of it by Baffin." Meager enough, it must be confessed, is that of Baffin, yet it would require a very great stretch of confidence to believe that any part of Baffin's brief description could be seen at forty miles distance. The old navigator merely says, it is "a fair sound, having an island in the midst, making two entrances, having many

inlets or smaller sounds within it, and is a fit place for the killing of whales."

Two hours after passing Wolstenholme, they came opposite Whale Sound, and passed it at a greater distance than the former; but they could not approach it in a direct line on account of the ice. The same evening it is stated that, near Carey's Islands, "the sea was clearer of floes and loose ice than we had ever seen it." They had advanced about midnight of the 19th to the northern corner of Baffin's Bay, where Sir Thomas Smith's Sound opens out, and which Ross says "was distinctly seen," and he named the two capes forming its entrance after the two ships, Isabella and Alexander. "I considered," says Ross, "the *bottom* of this sound to be about eighteen leagues distant, but its entrance was completely blocked up by ice." He forgets that, by his own showing, he was never nearer than sixty English miles from the *entrance* of it. An able and honest testimony on this point is contained in a small tract published by Mr. Fisher, the assistant surgeon of the Alexander, an intelligent and active officer, who says that, being much interested in ascertaining whether Greenland and the west land joined, he kept the deck all day; and though the weather was remarkably clear and fine till midnight, he could not see any such junction. "It is probable," he adds, "that the chasm or open space to the northward, where not any land could be traced *by me*, might be that which Baffin calls Sir Thomas Smith's Sound, and which he describes as the deepest and largest sound in all this bay; and it is not likely," says Fisher, "that we should have seen the bottom of it at such a distance, as we estimate that we are twenty leagues from the northern extreme of the west land visible."

As this sound is stated by Baffin to be the largest of all the sounds he discovered, and considering its position and its magnitude, it appears by no means improbable that it is a wide strait dividing Greenland from America, or the west land as Mr. Fisher calls it, thus verifying the dictum given by Burleigh more than two centuries ago. Among the papers of this extraordinary man in the British Museum is one on the subject of a north-west passage to Cathaia, in his lordship's own hand-

writing, which begins thus: "Considering Groynelande is well known to be an islande, and that it is not conjoyned to America in any part, and that there is no cause of doubte but that upon the north of Baccalaos the seas are open,"* &c.

But Baffin's account of Sir Thomas Smith's Sound, brief as it is, ought to have induced Ross to look into it: more especially as he voluntarily announces the expedition to be "for the purpose of exploring Baffin's Bay.' Baffin only says, "It runneth to the north of 78°, and is admirable in one respect, because in it is the greatest variation in the compasse of any part of the known world; for by divers good observations I found it to be above five points, or fifty-six degrees, varied to the westward." But the strongest reason that should have operated on Ross's mind was the possibility of this sound being a wide strait, opening directly into the Polar Sea, and affording the shortest passage through it to Behring's Strait—a discovery that would have immortalized him. He was at full liberty to use his discretion. Speaking of Davis's Strait, his instructions say:

"In the present state of uncertainty with regard to the movements of the ice, and with the very imperfect knowledge we have of this strait, and still more so of the sea beyond it, no specific instructions can be given for your guidance: the time and manner of proceeding to fulfill the ulterior object of your destination, in places where impediments may occur, must be left entirely to your discretion, in the exercise of which we rely on your zeal and skill in your profession for the accomplishment, as far as it can be accomplished, of the service on which you are employed."†

On rounding the northern and turning down the western coast, after passing the entrance of Sir Thomas Smith's Sound, Mr. Fisher asserts, and appeals to the log of the Alexander to prove it, that "no land was seen to the northward in that direction." One of the officers declares that he saw the sun at midnight through the opening of the sound in question, just skimming above the horizon. These are powerful grounds for believing that Burleigh did not make the assertion at random, "that Greenland was well known to be an island."

* Lansdowne Collection. † Admiralty Instructions.

Of the remaining sound of Baffin, which he names Alderman Jones's Sound, all we learn from Ross is, that "it answered to the description of Alderman Jones's Sound given by Baffin, who discovered it." "We were near the entrance of Jones's Sound," says Captain Sabine, "but not so near as Baffin, who sent his boat on shore." So might Commander Ross have done, who remained there from the 21st to the 23d, when, "toward evening," he says, "we successively made out the north and south points of the land across the *bottom* of this bay or inlet; at midnight a ridge of very high mountains was seen to extend nearly across the bottom of it, and joining another from the south; on the 24th we had a still better view of the land about Jones's Sound:" but still no boat was sent on shore on any of these four days.

It has been thought right to notice the total want of any information, in addition to that obtained by Baffin, respecting his discovery of these several sounds, as he has called them;* and the more so, after reading the following extraordinary paragraph in Commander Ross's Introduction, which can only have been penned from want of knowledge of the subject: "In rediscovering Baffin's Bay, I have derived great additional pleasure from the reflection that I have placed in a fair light before the public the merits of a worthy and able navigator, whose fate, like that of many others, it has not only been to have lost, by a combination of untoward circumstances, the opportunity of acquiring during his lifetime the fame he deserved, but, could he have lived to this period, to have seen his discoveries expunged from the records of geography, and the bay with which his name is so fairly associated treated as a phantom of the imagination."

Every person at all acquainted with voyages of discovery knows that Baffin was not only a skilfull navigator, but so well versed in nautical astronomy as to be able to deduce the longitude from lunar observations Whether, as pilot only to Robert Bylot, this last voyage was not exactly to his mind, and was therefore more vaguely and unsatisfactorily recorded than any of his

* Probably from their affording soundings for ships to anchor in.

others, his account of it is undoubtedly unlike the preceding narratives of his voyages. Baffin is so much aware of this, that, in his letter to Mr. John Wolstenholme, he observes, "Some may object and aske why we sought that coast no better?" to which he alleges in answer, the badness of the weather, the loss of anchors, the weakness of the crew, and the advanced season of the year. But as to the expunging his discoveries from the records of geography, the groundless assertion is itself no more than "a phantom of the imagination." Purchas excuses himself for not publishing his chart and tables on account of the expense; but *expunging* his discoveries is a *discovery* of Commander Ross, and there let it remain.*

Hitherto Ross had carefully avoided approaching any of these sounds within forty, fifty, or sixty miles, and consequently could not, or did not, send a boat to look into any of them, and yet he boasts of exploring and having rediscovered Baffin's Bay. However, in proceeding down the western coast, and the weather being foggy, he found himself unawares nearer to the shore than was supposed, and perhaps wished; in fact, he was just at the mouth of the only remaining, and by far the largest and most remarkable, as well as, from its position, the most important sound or opening of any that had been seen on either coast: this was what Baffin has called Sir James Lancaster's Sound. There was here, at least, no ice to choke it up; none in the vicinity of it; the soundings without it are marked 1000 fathoms; within it, 660 to 674 fathoms: no appearance of any *bottom* was here pretended to have been seen, and altogether it was utterly impossible, on any pretence, to avoid entering it; and the ships therefore stood in.

As this sound or bay has afforded the means of pretty well settling Commander Ross's reputation as a discoverer or explorer, it is fair to give him the full benefit of his own account of it:

"During this day (30th of August) much interest was excited on board by the appearance of this strait; the general

* Pilkington had the impertinence to call Baffin an impostor, but all that was ever known and published of Baffin's discoveries have been preserved.

opinion, however, was that it was only an inlet. Captain Sabine, who produced Baffin's account, was of opinion that we were off Lancaster Sound, and that there were no hopes of a passage until we should arrive at Cumberland Strait; to use his own words, there was 'no indication of a passage,' 'no appearance of a current,' 'no drift-wood,' and 'no swell from the northwest.' "—P. 171.

In the first place, it may be observed, that Baffin never entered Lancaster Sound, and, it may therefore be presumed, never gave any account of it. The rest must be altogether, and can not be otherwise than a misstatement. Captain Sabine might observe, merely as a fact, that no current or drift-wood appeared, which Ross, by a strange mistake, fancied he was *ordered* to search for, and constantly kept talking about; but those who know Captain Sabine, and are acquainted with his great talents, his love for science, and his zeal in pursuit of it, will be slow to believe any thing of the kind to have proceeded from him. But even were it possible he should have given utterance to an opinion for which he had no grounds, as no human being of any country, ancient or modern, is known ever to have entered this sound, is it not surprising that an officer of the navy, intrusted with the command of an expedition of discovery, should quote, as it were, in his own justification, and be guided by the opinion of an artillery officer, who perhaps was at sea for the first time? What, in fact, could Captain Sabine then know of either Lancaster Sound or Cumberland Strait, except, as to the latter, that it was well known to lead only to a parcel of islands, and that Fox's Channel, Southampton Island, the Welcome, all must be passed before the coast of America could be approached by that route? A brief account of the expedition, by an officer engaged in it, was published in a monthly journal, and is pronounced by Captain Sabine to be "a well-written and, which is more important, a faithful account of the proceedings of the expedition." In this account, so praised, it is stated, among other matters relating to Lancaster Sound, that "every officer and man, on the instant, as it were, made up his mind that *this must be the northwest passage.*" And it is added, "I firmly believe that every creature

on board anticipated the pleasure of writing an overland dispatch to his friends, either from the eastern or western shores of the Pacific."

But to return to Commander Ross's narrative :

"Soon after midnight the wind began to shift; I therefore made all sail, and left the Alexander considerably astern. At a little before four o'clock A.M. the land was seen at the *bottom* of the inlet by the officers of the watch; but before I got upon deck, a space of about seven degrees of the compass was obscured by the fog. The land which I then saw was a high ridge of mountains, extending directly across the bottom of the inlet. Although a passage in this direction appeared hopeless, I was determined completely to explore it, as the wind was favorable, and therefore continued all sail. I sounded, and found six hundred and seventy-four fathoms. There was, however, no current. Although all hopes were given up, even by the most sanguine, that a passage existed, and the weather continued thick, I determined to stand higher up, and put into any harbor I might discover, for the purpose of making magnetical observations. . . . About one, the Alexander being nearly out of sight to the eastward, we hove to for half an hour to let her come up a little; and at half past one, she being within six or seven miles of us, we again made sail. I intended to have sounded during this interval, but I found the southeast swell had so much increased, and the drift was so great, that it was impracticable."—P. 172–174.

In Lieutenant Parry's private journal it is said, "The swell comes from the northwest, compass (that is, south-southwest true), and continues just as it does in the ocean. It is impossible to remark this circumstance without feeling a *hope* that it *may* be caused by this inlet being a passage into a sea to the westward of it." A happy and rational hope that, within twelve months, Parry had the good fortune to realize. But to continue farther extracts from Ross on this part of the voyage :

"At half past two (31st August), when I went off deck to dinner, there were some hopes of its clearing, and I left orders to be called on the appearance of land or ice ahead. At three the officer of the watch, who was relieved to his dinner by Mr. Lewis, reported, on his coming into the cabin, that there was some appearance of its clearing at the bottom of the bay; I immediately, therefore, went on deck, and soon

after it completely cleared for about ten minutes, and I distinctly saw the land, round the bottom of the bay, forming a connected chain of mountains with those which extended along the north and south sides..... At this moment I also saw a continuity of ice, at the distance of seven miles, extending from one side of the bay to the other, between the nearest cape to the north, which I named after Sir George Warrender, and that to the south, which was named after Viscount Castlereagh. The mountains which occupied the center, in a north and south direction, were named Croker's Mountains, after the Secretary to the Admiralty. The south-west corner, which formed a spacious bay, completely occupied by ice, was named Barrow's Bay, and is bounded on the south by Cape Castlereagh, and on the north by Cape Rosamond, which is a headland that projects eastward from the high land in the center. The north corner, which was the last I had made out, was a deep inlet; and as it answered exactly to the latitude given by Baffin of Lancaster Sound, I have no doubt that it was the same, and consider it a most remarkable instance of the accuracy of that able navigator." —P. 174, 175.

It was, indeed, a most remarkable instance of accuracy in Baffin, which can be explained only by supposing him to have been gifted by Arctic vision of one hundred and fifty miles, without which he never could have got sight of Ross's *North Corner* from the sea, for he never came near even the *entrance* of Lancaster Sound, "there being," says this old and able navigator, "a ledge of ice between the shore and us." All this is deplorable enough, and it may be considered as not worth the while to dwell longer on this part of the narrative, or to notice "the accurate view of Baffin's Bay," and "the special chart of the land"—the putting about the ship, assisted by a whale-fisher, the only officer on deck—the sole spectators of Croker's Mountains and the vast barrier of ice, seen only by Mr. Lewis and James Haig, the leading man, while all the other officers were enjoying their dinner, and ignorant of what was going on, which is not the usual custom in a man-of-war when the ship is going about.

Too glad to get out of Lancaster Sound, "It became advisable," says Ross, "to stand out of this dangerous inlet, in which we were embayed, being within it above

eighty miles." Captain Parry and Captain Sabine both say *thirty miles*. Since the period of this *dangerous inlet* being navigated by Parry, not less than four times, it has been visited annually by whalers, without danger, and without molestation by the ice. Nay, Ross himself had the courage—can it be called "moral courage?"—to revisit, some years afterward, this horrible spot in a miserable kind of ship, fitted out at the expense of a private individual for some purpose or other, which ship, however, he left frozen up at the bottom of Regent's Inlet, and, with great fatigue and difficulty, succeeded in getting back to Lancaster Sound, and had the good luck to be picked up, in this "*dangerous inlet*," by a whaler—the very identical Isabella which he once commanded.

The unsatisfactory manner in which he hastened out of Sir James Lancaster's Sound, and ran past the Alexander, without the least communication with Lieutenant Parry, seems to have drawn from him a strange sort of something that he probably conceived to be a justification of his proceedings:

"As I have given a particular chart of the bay or inlet which was explored between the 29th of August and the 1st of September, by the expedition under my command, and as there will be found on the preceding pages copies of the meteorological logs of the two ships, which were supplied and *corrected* by the hydrographer of the Admiralty, from the official documents which were lodged in his office on the arrival of the ships, it must be unnecessary for me to recapitulate the facts which I have already stated, as, by referring to these authenticated documents, they will be seen by inspection. But it may not be amiss to point out the parts in my official instructions, which are printed in the beginning of this work, wherein I am directed to pay particular attention to the currents, and to be guided by them; and also to the part which recommends me to look for the north-east point of America, or, in other words, the northwest passage about the seventy-second degree of latitude. As it was fully proved that no current existed in this inlet, which we had just explored, or to the northward of it, it naturally followed that I should have supposed myself still to the northward of the current, which had been so confidently asserted to exist; and that, therefore, this inlet was not the place to persevere in forcing a passage, but that there was reason to

expect it would be found farther south. My orders, 'to stand well to the north,' had already been fully obeyed, and no current had been found; and if 'a current of some force' did exist, as from the 'best authorities' we had reason to believe was the fact, it could be nowhere but to the southward of this latitude. As, in my instructions, I am also directed 'to leave the ice about the 15th or 20th of September, or, at latest, the 1st of October,' I had only one month left for my operations, in which month the nights are long, and, according to a fair calculation, not more than two days' clear weather out of seven could be expected. It may, therefore, with propriety be stated that I had only eight days remaining to explore the remainder of Baffin's Bay, a distance of above four hundred miles. Of this space nearly two hundred miles had never been examined; a range including the supposed place of the discontinuity of the continent, and that to which my attention had been particularly called, and where the imaginary current, which was to be my guide, was to be expected. It is, perhaps, unnecessary to add that, under these circumstances, I was anxious to proceed to the spot where it must be evident I had the best chance of success. Yet my anxiety, on the other hand, to leave no part of the coast unexplored, even after all hopes of a passage were given up, determined me to persevere as I did, notwithstanding there was no current, a material decrease in the temperature of the sea, and no drift-wood, or other indication of a passage, until I actually saw the barrier of high mountains, and the continuity of ice, which put the question at rest. That I did so persevere became afterward a source of great satisfaction, as I was fortunate enough to succeed also in exploring every part of the coast to the southward to which my attention was to be directed, and where I was led to expect that the current was to be found. This was a much more essential part of my duty than the making of magnetical observations, which was the only inducement still remaining to linger in that dangerous bay, where much time might have been wasted in attempting to land, perhaps without success, or, at any rate, without attaining any adequate results. My opinions were mentioned to several of the officers after I had determined to proceed to the southward, and also to Captain Sabine, who repeated on every occasion that there was no *indication* of a passage."—P. 182–184.

This can only be looked upon as a pitiable excuse for running away home, and is a most clumsy perversion of his instructions, the obvious meaning of which he has not only misconceived, but misquoted. A spe-

cies of infatuation, with regard to currents, appears to have seized on his mind; he is forever hunting for, but never gets scent of, a current. The Lords of the Admiralty had merely suggested that if he should meet with a current, which, "from the best information" (not *authorities*, as he quotes) "we have been able to obtain, runs from the northward toward the upper part of Davis's Strait." And again, "In passing up the strait" (*of Davis*), "if *such a current should be discovered*, it will be of the greatest importance to you, as leading you direct to the opening by which it may be supposed to pass from the Arctic Sea into Davis's Strait." Again, "If it should come from the northwest or west, it will prove the best guide you can follow to lead you to the discovery of which you are in search."* His failure in the discovery of this *imaginary current* is so far a reflection on his sagacity, as every navigator, both before and after his time, who has entered Davis's Strait has experienced a current of considerable force setting down that strait; and it is now known that the water of the Polar Sea passes through several channels, and down the Sea of Spitzbergen into the Atlantic.

On taking leave of Lancaster Sound on the 31st of August, and proceeding homeward along the same coast, the following day Ross sent a boat on shore, in a small bay near Cape Byam Martin, with orders "to take possession of the country, in the name and on behalf of his Britannic majesty," with the usual silly ceremony —the more silly when the object is worthless, as in the present case—a barren, uninhabited country, covered with ice and snow, the only subjects of his majesty, in this portion of his newly-acquired dominions, consisting of half-starved bears, deer, foxes, white hares, and such other creatures as are commonly met with in these regions of the globe. Lieutenant Parry had command of the shore party, and obtained what are said to be "some valuable specimens, and the officers of both ships were equally active and zealous." The whole of this coast, that is to say, from latitude 73° 37′ to latitude 62° 51′, down to Cumberland Strait, is peopled abundantly on the chart with great but unprolific names, chiefly

* Admiralty Instructions.

ry duties of the seaman's profession. The ordinary duties of a good seaman are well known; that he can hand, reef, steer, and heave the lead, keep the dead reckoning, and take and work an observation for the latitude; how much beyond this Sir George does not appear to have pledged himself. Indeed, Ross states somewhat modestly, in his introduction, "My nautical education has taught me to act, and not to question; to obey orders as far as possible, not to discuss probabilities, or examine philosophical or unphilosophical speculations. I have here attempted nothing beyond the journal of a seaman; if I had done more, I might have done worse."

Now something beyond the general character given by Sir George Hope was required from an officer who ventured to accept the command of an expedition for the purposes of enlarging the wide field of science and discovery, and moreover for that of a peculiar discovery; one that had baffled the skill of the most able and persevering navigators for a period at intervals of more than three hundred years. It has been truly observed, that "this is a service for which all officers, however brave and intelligent they may be, are not equally qualified; it requires a peculiar tact, an inquisitive and persevering pursuit after details of fact, not always interesting, a contempt of danger, and an enthusiasm not to be damped by ordinary difficulties."

In fact, Commander Ross's services, previous to this voyage, were only adapted—as Sir George Hope, and, indeed, he himself has stated them—to qualify for the ordinary duties of a good seaman; but least of all, as will be seen, for conducting a voyage of discovery. "In the year 1786," he says, "I entered the royal navy; continued in it for four years; was in the merchant service till 1794; in the East India Company's service till 1799; then returned to the navy; acting lieutenant of the Weasel, of the Clyde, &c. Went with Lord de Saumarez as midshipman, often acting lieutenant, but ranked only as midshipman; confirmed as lieutenant in 1805; served as first lieutenant in three different ships; promoted commander in 1812, and commanded three different ships."* He might have

* His examination before a Select Committee of the House of Commons on the Arctic Sea Expedition.

added, never served out of the Baltic and the White Sea, except once, on the north coast of Scotland.

Now it may broadly be stated that Commander Ross, by his own showing, did not at all answer the description of an officer fitted for the present service; and his acts and his book prove it. His patron who recommended him was himself a thorough-bred seaman, an honest, straight-forward, and downright* officer, and sincerely believed, no doubt, that the person he named was an active and zealous officer "in the ordinary duties of his profession;" but there is reason to believe that, in offering him the command of a Voyage of Discovery, he had not given due consideration to the qualifications that such a command required.

Lieutenant Parry, who commanded the Alexander, served several years on the coast of North America, where he was distinguished as an excellent navigator, theoretical as well as practical. He drew up a little treatise, especially for the use of the young officers of the fleet, on nautical astronomy, containing directions for finding the principal fixed stars visible in the northern hemisphere. A copy of this, with the necessary drawings, being sent to his father, Dr. Parry, of Bath, he had it printed. While employed in America, led by a spirit of enterprise, he volunteered for, and was appointed to, the Congo expedition under Captain Tuckey, but fortunately could not join in time. Still, however, his attention was drawn toward African discovery, and about the close of 1817 he wrote to a friend, detailing his views on the subject; and just as he had finished his letter, a paragraph in a newspaper, alluding to the attempt about to be made for the discovery of a northwest passage, caught his eye, and he added a postscript, referring to this, and said "he was ready for hot or for cold"—Africa or the Polar regions. His friend took this letter to the Secretary of the Admiralty,† which Parry says he had reason to believe was the immediate cause

* The word reminds one of a very significant *sobriquet* on Admiral Sir James Saumarez, Flag-Captain Sir George Hope, and the Ship's Captain Dumaresq—the three designated as *up-right*, *down-right*, and *never-right*.

† Mr. Barrow, who was so much pleased by the letter, and the little treatise which accompanied it, that he at once submitted to Lord Melville his opinion, that he was just the man for such an appointment.

of his appointment to that expedition, then preparing for the latter object.

Lieutenant Parry, it may safely be said, did not disappoint the expectations of those who recommended him; but he was himself grievously disappointed at the manner in which the voyage in question was conducted, and at the total want of facilities given for collecting such a body of observations on various subjects of scientific inquiry, of geographical information, and, above all, at the careless manner in which every attempt, or, rather, want of attempt, was slurred over to fulfill the instructions of government. Owing to this, instead of being able, on their return to England, to produce any results worthy of the liberality with which the expedition had been fitted out, there was not an officer in either ship that did not express mortification and disappointment.

Lieutenant Robertson was an active and intelligent officer, a good observer and surveyor; and Lieutenant Hoppner, son of the artist, an excellent draughtsman. One of the midshipmen, J. C. Ross, a young man of the most active and willing disposition, has subsequently been employed in every Arctic expedition, commanded the recent Antarctic voyage of three years, and is now Captain Sir James Clarke Ross, married, and enjoying the fruit of his valuable and highly praiseworthy labors. His name will frequently occur.

Captain Sabine, of the Royal Artillery, well known for his scientific acquirements, and for the knowledge and use of mathematical and astronomical instruments, being desirous of the opportunity of putting his skill into practical experience, was requested to join the expedition as a volunteer, and, like the rest, had but too much cause to be disappointed and aggrieved. An account of his subsequent and valuable labors, however, will hereafter find a place in the present narrative.

It would have been more agreeable, in the outset of the present volume, to have passed over this first voyage of discovery in the Arctic regions, than to be obliged to notice it under a feeling of disappointment, which the perusal of it so unavoidably and so provokingly creates; but as it constitutes the first link in the chain of the interesting publications in question, it could not with

propriety have been omitted, though it can afford little pleasure to pass censure where there is every desire to praise. In matters of fact, however, like the present, the truth must be spoken; and it may be proper and only due justice to state at once that no blame can possibly attach to any individual in the two ships for any misstatements, negligence, or lack of information which may occur in the original narrative; that all appear to have been anxious to effect whatever could be accomplished to meet the views of government, as far as the few opportunities given to them would allow. At the same time, it is possible that some of the omissions may have happened from a misconception of what was required of the commander, and from the novelty of the service, in the nature and peculiar duties of which he had now obviously for the first time been engaged; and it is so far due to him to admit, farther, that the appointment was not of his own seeking, but was voluntarily offered to him by one who, it would seem, was as little acquainted with the peculiar service as was Mr. Ross himself.

On the 18th of April the ships left the river, arrived at Lerwick on the 30th, and on the 1st of June were somewhere on the eastern side of Davis's Straits; proceeded slowly between the ice and the western shore of Greenland, passing a number of whale ships busily employed, and on the 17th of June got into Waygat Strait, in which were forty-five whalers detained by the ice. This strait is formed between the shore of Greenland and the Island of Disco, on which is a Danish settlement. In this neighborhood, among the points of land, the shoals, and islands that abound, the ships were so hampered with ice, that it was not until the 3d of July they reached the Women's Islands.

Their detention, however, did not lack amusement. The half-caste sons and daughters of Danes and Esquimaux danced Scotch reels on the deck of the Isabella with the sailors; and Ross says:

"Sackhouse's mirth and joy exceeded all bounds, and with good-humored officiousness he performed the office of master of the ceremonies. An Esquimaux master of the ceremonies to a ball on the deck of his majesty's ships in the icy

seas of Greenland was an office somewhat new, but Nash himself could not have performed his functions in a manner more appropriate. It did not belong even to Nash himself to combine in his own person, like Jack, the discordant qualifications of seaman, interpreter, draughtsman, and master of ceremonies to a ball, with those of an active fisher of seals and a hunter of white bears."—P. 55-6.

This intelligent and amiable Esquimaux, Jack Saccheous (or Sackhouse), affords a strong example of what a little kindness and attention will effect on human beings, even in the lowest scale of existence. Of the history of this young man there will be occasion to speak hereafter.

On the fitting out of the present expedition, Captain Basil Hall, finding that Saccheous had a wish to join it, made his desire known at the Admiralty, and he was accordingly appointed interpreter, in which capacity he proved exceedingly useful in the very limited opportunity that occurred of holding any communication with his native countrymen. Among the mirthful group before mentioned, Ross tells us:

"A daughter of the Danish resident, about eighteen years of age, and by far the best looking of the group, was the object of Jack's particular attentions; which being observed by one of our officers, he gave him a lady's shawl, ornamented with spangles, as an offering for her acceptance. He presented it in a most respectful and not ungraceful manner to the damsel, who bashfully took a pewter ring from her finger and presented it to him in return; rewarding him, at the same time, with an eloquent smile, which could leave no possible doubt on our Esquimaux's mind that he had made an impression on her heart."—P. 56.

After some delay the wind changed, and the ice began to separate, leaving an opening along the coast; but Jack, who had gone on shore with his countrymen, had not returned. A boat was therefore sent to bring him off; but the poor fellow was found in one of the huts with his collar-bone broken, having, under the idea, as expressed by himself, of "*plenty powder, plenty kill,*" overloaded his gun, and the violence of the recoil had caused the accident.

In proceeding northernly, the expedition came up with

several groups of whalers that had passed through the floes of ice, in one of which it was also shortly after beset, in latitude 75° 35′, "the Dexterity whaler now alone continuing in sight." Yet, in the same page, Ross says, "We are now arrived at a point between which and Cape Dudley Digges land had not been seen by former navigators;" as if whale-fishers were excluded from the class of navigators. He then goes on to say, that "between latitude 75° 12′ and 76° the shore formed a capacious bay, in the midst of which rose a remarkable spiral rock; this I named Melville's Monument, in grateful remembrance of the late viscount, from whom I received my first commission. To the bay itself I gave the name of Melville's Bay, from respect to the present First Lord of the Admiralty. It is situated between 75° 12′ and 76°, and abounds with whales, many of which were taken by the ships that were persevering enough to follow us."

And no doubt numbers of whalers, for ages before this, had persevered in their search of whales far beyond the latitude of 76°; but the expedition being one for the purpose of discovery, something new, it would seem, was to be struck out at this early period, while on the Greenland side of Baffin's Bay—a coast which could afford nothing connected with the Polar Sea or with the northwest passage. In point of fact, Ross, on the outset of the voyage, even in the title-page, misstates (he could not mistake) the object of his instructions. He says the voyage was made "for the purpose of exploring Baffin's Bay." Now there is not a word in the instructions about exploring Baffin's Bay; he was to stand well to the northward before crossing over to the westward, but not to stop on either coast: "the first and most important object of this voyage is to be the discovery of a passage through *Davis's Straits*, along the northern coast of America." On the western coast there could be no passage into the Polar Sea, nor toward the coast of America.

Opportunely, however, an event occurred which afforded him an occasion, if not an excuse, for delay. On the 10th of August eight sledges, drawn by native Esquimaux, were observed advancing toward the place

where the ships were at anchor, and Saccheous was dispatched with a white flag and some presents to hold a parley with them, they being placed at one side of a canal or chasm in the ice, and he on the other side. After loud shouts, words, and gestures, Saccheous soon perceived that their language was the same as his, but of a different dialect, and, holding up his presents, he called out, "Come on;" but the reply was, "No, no; go away." And one of them, approaching the edge of the canal, repeated, "Go away; I can kill you," holding up a knife. Saccheous threw over an English knife, saying, "Take that." This they picked up, shouted, and *pulled their noses*. Saccheous, in return, called out *Heigh-yaw! pulling his nose* with the same gesture.

This pulling of noses, which is represented to be their mode of a friendly salutation, is a trite matter of little moment, and would not be mentioned here but for the singular circumstance, which has been told by several of the officers, and in print, that they never saw nor heard of it till it was mentioned by Commander Ross, for the first time, at Shetland, on their return home. It is scarcely possible that such a foolish ceremony, if frequently and solemnly repeated, could have escaped the notice of all the officers except that of the commander; yet there must be something in it, for Back, in his Arctic journey, mentions *rubbing of noses* as an Esquimaux salutation.

The following is somewhat curious, considering the number and frequency of whalers visiting this part of the coast, where no doubt much intercourse must have taken place between them and the innocent natives: Ross says they soon became more familiar, and, pointing to the ships, eagerly asked, "What great creatures these were? Do they come from the sun or the moon? do they give us light by night or by day?" repeating the question, "What were they?" to which Saccheous replied, "They were houses made of wood." They responded "No: they are alive; we have seen them move their wings." More enlightened than these Arctic Highlanders (for so Ross calls them) did the messengers of Montezuma, on the arrival of the ships of Cortez, in like manner eagerly inquire,

"What divine monsters, oh ye gods, are these,
That float in air, and fly upon the seas!
Come they alive or dead upon the shore?"* &c.

Saccheous, it seems, succeeded at last, "by many arguments, to persuade them that he was flesh and blood;" and the most courageous "ventured to touch his hand, then pulling himself by the nose, set up a shout, in which he was joined by Saccheous and three others." But enough of this, which runs through eighteen or twenty pages, followed by a whole chapter of twenty more, which, considered under all circumstances, would be amusing enough, did it not prepare the reader for suspicion as to its accuracy, as well as of many other statements subsequently recorded in the book. The titles of this extraordinary chapter are: "*The Situation of the Arctic Highlands—Nature of the Country—Produce of the Country—Language of the Arctic Highlanders—Origin of the Arctic Highlanders—Dress—Description—Subject of Religion—Mode of Living, and Customs—Habits and Customs.*" Ross, indeed, suspects that this account "may appear in some points to be defective;" he may safely satisfy himself that it will not only *appear*, in some points, to be *defective*, but will be so pronounced in all: in point of fact, he never set his foot on shore, and could not, by any possibility, have known any thing of the stuff he has set down, which is of that kind of manufacture not worth the paper on which it is printed. Most readers will agree with the writer in a popular journal, who calls it "a bill of fare like that of the landlord in the play—all the good things are stuffed into the bill, while nothing is found in the larder."

Ross may certainly plead examples without number, in the books of modern travelers, wherein imagination has very materially assisted in supplying the details; but something approaching to *fact* is expected in a voyage like the present, as any deviation, even in a trifling subject, is apt to throw a doubt on those of greater moment. No doubt, however, can be entertained of the discovery of a physical object (not new, however) found on the cliffs of this part of the coast of Baffin's Bay, not far from Cape Dudley Digges. "We now discovered,"

* Dryden's Emperor of Mexico.

says Ross, "that the snow on the face of the cliffs presented an appearance both novel and interesting, being apparently stained or covered by some substance which gave it a deep crimson color. This snow," he adds, "was penetrated even down to the rock, in many places to a depth of ten or twelve feet, by the coloring matter." Mr. Fisher says, "It is worthy of remark, that this coloring matter, be it what it may, does not penetrate more than an inch or two beneath the surface of the snow."

Many conjectures, of course, were afloat concerning the cause of so unusual an appearance; but Ross says, "it was at once determined it could not be the dung of birds;" rather a hasty conclusion, for Mr. Brande the chemist, to whom it was first submitted on the return of the expedition, for the purpose of being analyzed, having detected uric acid, pronounced it at once to be the excrement of birds. It was the general opinion of the officers, who examined it with the microscope, that it must be vegetable; and in this opinion Dr. Wollaston concurred, after a minute examination both by the microscope and chemical tests—yet *he* even had his doubts. Mr. Brown, the celebrated botanist, conjectured it might be derived from some of the algæ, confervæ, or tremellæ (*Tremella cruenta*); the more probable, as the roots of the moss (a species of *Polytricum*), common on these cliffs, are deep scarlet—deep, indeed, must they be to sanction the outrageously exaggerated print of these crimson cliffs, as colored in the volume. There is nothing new, however, in the discovery of red snow. Pliny and other writers of his time mention it; Saussure found it in various parts of the Alps; Martin found it in Spitzbergen, and no doubt it is to be met with in most alpine regions.

A little farther on, the ships were visited by three other Esquimaux, from whom information was received that the iron part of their knives was found on a mountain in great masses, and that it was a part of the mountain; that in other places it was found in solid pieces on the surface, and that they cut it off with hard stone. Ross, however, could not succeed in obtaining any of the masses; but a small piece, being examined in England, was found to contain the usual proportion of nickel met with in meteoric stones.

Having now passed Cape Dudley Digges, which Ross found to be a few miles to the southward of the situation in which Baffin has laid it down, Wolstenholme Island came in sight to the northward; and, "as we were steering for it with a fine breeze, and the sea almost clear of ice, we gave up all idea of communicating with the *King of the Arctic Highlanders*; the hopes of attaining the grand object of the enterprise were now raised to such a height as to make that, which was considered so desirable but a few hours before, an object of no moment whatever." It was, indeed, quite time to think of the "grand object," and leave behind that "so desirable one"—the king of a miserable tribe of Esquimaux—the year having advanced to the 18th of August, and the "enterprise" being no farther advanced than to the western coast of Greenland, on which coast by no possibility could a passage be found. Something more, however, than the scanty geography, which Baffin alone has afforded us, would, no doubt, have been desirable even on this coast of Greenland.

He tells us that Wolstenholme Sound was completely blocked up with ice; but if any faith is due to his own chart, he must have passed it at the distance of forty miles at least. "This sound," he says, "seemed to be eighteen or twenty leagues in depth;" and if so, by his own account he must have seen the bottom of it, though that was a point distant from the ship at least a hundred miles; but he had previously prepared his readers for a long sight, having assured them that, in these Arctic regions, they were often able to see land at an immense distance; and, farther, that "we have certain proof that the power of vision was extended beyond one hundred and fifty miles!"—(P. 143.) Thus he says, "We found the entrace to this inlet" (Wolstenholme, when forty miles off) "and the general form and appearance of the land to agree extremely well with the description given of it by Baffin." Meager enough, it must be confessed, is that of Baffin, yet it would require a very great stretch of confidence to believe that any part of Baffin's brief description could be seen at forty miles distance. The old navigator merely says, it is "a fair sound, having an island in the midst, making two entrances, having many

inlets or smaller sounds within it, and is a fit place for the killing of whales."

Two hours after passing Wolstenholme, they came opposite Whale Sound, and passed it at a greater distance than the former; but they could not approach it in a direct line on account of the ice. The same evening it is stated that, near Carey's Islands, "the sea was clearer of floes and loose ice than we had ever seen it." They had advanced about midnight of the 19th to the northern corner of Baffin's Bay, where Sir Thomas Smith's Sound opens out, and which Ross says "was distinctly seen," and he named the two capes forming its entrance after the two ships, Isabella and Alexander. "I considered," says Ross, "the *bottom* of this sound to be about eighteen leagues distant, but its entrance was completely blocked up by ice." He forgets that, by his own showing, he was never nearer than sixty English miles from the *entrance* of it. An able and honest testimony on this point is contained in a small tract published by Mr. Fisher, the assistant surgeon of the Alexander, an intelligent and active officer, who says that, being much interested in ascertaining whether Greenland and the west land joined, he kept the deck all day; and though the weather was remarkably clear and fine till midnight, he could not see any such junction. "It is probable," he adds, "that the chasm or open space to the northward, where not any land could be traced *by me*, might be that which Baffin calls Sir Thomas Smith's Sound, and which he describes as the deepest and largest sound in all this bay; and it is not likely," says Fisher, "that we should have seen the bottom of it at such a distance, as we estimate that we are twenty leagues from the northern extreme of the west land visible."

As this sound is stated by Baffin to be the largest of all the sounds he discovered, and considering its position and its magnitude, it appears by no means improbable that it is a wide strait dividing Greenland from America, or the west land as Mr. Fisher calls it, thus verifying the dictum given by Burleigh more than two centuries ago. Among the papers of this extraordinary man in the British Museum is one on the subject of a north-west passage to Cathaia, in his lordship's own hand-

writing, which begins thus: "Considering Groynelande is well known to be an islande, and that it is not conjoyned to America in any part, and that there is no cause of doubte but that upon the north of Baccalaos the seas are open,"* &c.

But Baffin's account of Sir Thomas Smith's Sound, brief as it is, ought to have induced Ross to look into it: more especially as he voluntarily announces the expedition to be "for the purpose of exploring Baffin's Bay.' Baffin only says, "It runneth to the north of 78°, and is admirable in one respect, because in it is the greatest variation in the compasse of any part of the known world; for by divers good observations I found it to be above five points, or fifty-six degrees, varied to the westward." But the strongest reason that should have operated on Ross's mind was the possibility of this sound being a wide strait, opening directly into the Polar Sea, and affording the shortest passage through it to Behring's Strait—a discovery that would have immortalized him. He was at full liberty to use his discretion. Speaking of Davis's Strait, his instructions say:

"In the present state of uncertainty with regard to the movements of the ice, and with the very imperfect knowledge we have of this strait, and still more so of the sea beyond it, no specific instructions can be given for your guidance: the time and manner of proceeding to fulfill the ulterior object of your destination, in places where impediments may occur, must be left entirely to your discretion, in the exercise of which we rely on your zeal and skill in your profession for the accomplishment, as far as it can be accomplished, of the service on which you are employed."†

On rounding the northern and turning down the western coast, after passing the entrance of Sir Thomas Smith's Sound, Mr. Fisher asserts, and appeals to the log of the Alexander to prove it, that "no land was seen to the northward in that direction." One of the officers declares that he saw the sun at midnight through the opening of the sound in question, just skimming above the horizon. These are powerful grounds for believing that Burleigh did not make the assertion at random, "that Greenland was well known to be an island."

* Lansdowne Collection. † Admiralty Instructions.

Of the remaining sound of Baffin, which he names Alderman Jones's Sound, all we learn from Ross is, that "it answered to the description of Alderman Jones's Sound given by Baffin, who discovered it." "We were near the entrance of Jones's Sound," says Captain Sabine, "but not so near as Baffin, who sent his boat on shore." So might Commander Ross have done, who remained there from the 21st to the 23d, when, "toward evening," he says, "we successively made out the north and south points of the land across the *bottom* of this bay or inlet; at midnight a ridge of very high mountains was seen to extend nearly across the bottom of it, and joining another from the south; on the 24th we had a still better view of the land about Jones's Sound:" but still no boat was sent on shore on any of these four days.

It has been thought right to notice the total want of any information, in addition to that obtained by Baffin, respecting his discovery of these several sounds, as he has called them;* and the more so, after reading the following extraordinary paragraph in Commander Ross's Introduction, which can only have been penned from want of knowledge of the subject: "In rediscovering Baffin's Bay, I have derived great additional pleasure from the reflection that I have placed in a fair light before the public the merits of a worthy and able navigator, whose fate, like that of many others, it has not only been to have lost, by a combination of untoward circumstances, the opportunity of acquiring during his lifetime the fame he deserved, but, could he have lived to this period, to have seen his discoveries expunged from the records of geography, and the bay with which his name is so fairly associated treated as a phantom of the imagination."

Every person at all acquainted with voyages of discovery knows that Baffin was not only a skilfull navigator, but so well versed in nautical astronomy as to be able to deduce the longitude from lunar observations Whether, as pilot only to Robert Bylot, this last voyage was not exactly to his mind, and was therefore more vaguely and unsatisfactorily recorded than any of his

* Probably from their affording soundings for ships to anchor in.

others, his account of it is undoubtedly unlike the preceding narratives of his voyages. Baffin is so much aware of this, that, in his letter to Mr. John Wolstenholme, he observes, "Some may object and aske why we sought that coast no better?" to which he alleges in answer, the badness of the weather, the loss of anchors, the weakness of the crew, and the advanced season of the year. But as to the expunging his discoveries from the records of geography, the groundless assertion is itself no more than "a phantom of the imagination." Purchas excuses himself for not publishing his chart and tables on account of the expense; but *expunging* his discoveries is a *discovery* of Commander Ross, and there let it remain.*

Hitherto Ross had carefully avoided approaching any of these sounds within forty, fifty, or sixty miles, and consequently could not, or did not, send a boat to look into any of them, and yet he boasts of exploring and having rediscovered Baffin's Bay. However, in proceeding down the western coast, and the weather being foggy, he found himself unawares nearer to the shore than was supposed, and perhaps wished; in fact, he was just at the mouth of the only remaining, and by far the largest and most remarkable, as well as, from its position, the most important sound or opening of any that had been seen on either coast: this was what Baffin has called Sir James Lancaster's Sound. There was here, at least, no ice to choke it up; none in the vicinity of it; the soundings without it are marked 1000 fathoms; within it, 660 to 674 fathoms: no appearance of any *bottom* was here pretended to have been seen, and altogether it was utterly impossible, on any pretence, to avoid entering it; and the ships therefore stood in.

As this sound or bay has afforded the means of pretty well settling Commander Ross's reputation as a discoverer or explorer, it is fair to give him the full benefit of his own account of it:

"During this day (30th of August) much interest was excited on board by the appearance of this strait; the general

* Pilkington had the impertinence to call Baffin an impostor, but all that was ever known and published of Baffin's discoveries have been preserved.

opinion, however, was that it was only an inlet. Captain Sabine, who produced Baffin's account, was of opinion that we were off Lancaster Sound, and that there were no hopes of a passage until we should arrive at Cumberland Strait; to use his own words, there was 'no indication of a passage,' 'no appearance of a current,' 'no drift-wood,' and 'no swell from the northwest.' "—P. 171.

In the first place, it may be observed, that Baffin never entered Lancaster Sound, and, it may therefore be presumed, never gave any account of it. The rest must be altogether, and can not be otherwise than a misstatement. Captain Sabine might observe, merely as a fact, that no current or drift-wood appeared, which Ross, by a strange mistake, fancied he was *ordered* to search for, and constantly kept talking about; but those who know Captain Sabine, and are acquainted with his great talents, his love for science, and his zeal in pursuit of it, will be slow to believe any thing of the kind to have proceeded from him. But even were it possible he should have given utterance to an opinion for which he had no grounds, as no human being of any country, ancient or modern, is known ever to have entered this sound, is it not surprising that an officer of the navy, intrusted with the command of an expedition of discovery, should quote, as it were, in his own justification, and be guided by the opinion of an artillery officer, who perhaps was at sea for the first time? What, in fact, could Captain Sabine then know of either Lancaster Sound or Cumberland Strait, except, as to the latter, that it was well known to lead only to a parcel of islands, and that Fox's Channel, Southampton Island, the Welcome, all must be passed before the coast of America could be approached by that route? A brief account of the expedition, by an officer engaged in it, was published in a monthly journal, and is pronounced by Captain Sabine to be "a well-written and, which is more important, a faithful account of the proceedings of the expedition." In this account, so praised, it is stated, among other matters relating to Lancaster Sound, that "every officer and man, on the instant, as it were, made up his mind that *this must be the northwest passage.*" And it is added, "I firmly believe that every creature

on board anticipated the pleasure of writing an overland dispatch to his friends, either from the eastern or western shores of the Pacific."

But to return to Commander Ross's narrative:

"Soon after midnight the wind began to shift; I therefore made all sail, and left the Alexander considerably astern. At a little before four o'clock A.M. the land was seen at the *bottom* of the inlet by the officers of the watch; but before I got upon deck, a space of about seven degrees of the compass was obscured by the fog. The land which I then saw was a high ridge of mountains, extending directly across the bottom of the inlet. Although a passage in this direction appeared hopeless, I was determined completely to explore it, as the wind was favorable, and therefore continued all sail. I sounded, and found six hundred and seventy-four fathoms. There was, however, no current. Although all hopes were given up, even by the most sanguine, that a passage existed, and the weather continued thick, I determined to stand higher up, and put into any harbor I might discover, for the purpose of making magnetical observations. . . . About one, the Alexander being nearly out of sight to the eastward, we hove to for half an hour to let her come up a little; and at half past one, she being within six or seven miles of us, we again made sail. I intended to have sounded during this interval, but I found the southeast swell had so much increased, and the drift was so great, that it was impracticable."—P. 172-174.

In Lieutenant Parry's private journal it is said, "The swell comes from the northwest, compass (that is, south-southwest true), and continues just as it does in the ocean. It is impossible to remark this circumstance without feeling a *hope* that it *may* be caused by this inlet being a passage into a sea to the westward of it." A happy and rational hope that, within twelve months, Parry had the good fortune to realize. But to continue farther extracts from Ross on this part of the voyage:

"At half past two (31st August), when I went off deck to dinner, there were some hopes of its clearing, and I left orders to be called on the appearance of land or ice ahead. At three the officer of the watch, who was relieved to his dinner by Mr. Lewis, reported, on his coming into the cabin, that there was some appearance of its clearing at the bottom of the bay; I immediately, therefore, went on deck, and soon

after it completely cleared for about ten minutes, and I distinctly saw the land, round the bottom of the bay, forming a connected chain of mountains with those which extended along the north and south sides..... At this moment I also saw a continuity of ice, at the distance of seven miles, extending from one side of the bay to the other, between the nearest cape to the north, which I named after Sir George Warrender, and that to the south, which was named after Viscount Castlereagh. The mountains which occupied the center, in a north and south direction, were named Croker's Mountains, after the Secretary to the Admiralty. The south-west corner, which formed a spacious bay, completely occupied by ice, was named Barrow's Bay, and is bounded on the south by Cape Castlereagh, and on the north by Cape Rosamond, which is a headland that projects eastward from the high land in the center. The north corner, which was the last I had made out, was a deep inlet; and as it answered exactly to the latitude given by Baffin of Lancaster Sound, I have no doubt that it was the same, and consider it a most remarkable instance of the accuracy of that able navigator." —P. 174, 175.

It was, indeed, a most remarkable instance of accuracy in Baffin, which can be explained only by supposing him to have been gifted by Arctic vision of one hundred and fifty miles, without which he never could have got sight of Ross's *North Corner* from the sea, for he never came near even the *entrance* of Lancaster Sound, "there being," says this old and able navigator, "a ledge of ice between the shore and us." All this is deplorable enough, and it may be considered as not worth the while to dwell longer on this part of the narrative, or to notice "the accurate view of Baffin's Bay," and "the special chart of the land"—the putting about the ship, assisted by a whale-fisher, the only officer on deck—the sole spectators of Croker's Mountains and the vast barrier of ice, seen only by Mr. Lewis and James Haig, the leading man, while all the other officers were enjoying their dinner, and ignorant of what was going on, which is not the usual custom in a man-of-war when the ship is going about.

Too glad to get out of Lancaster Sound, "It became advisable," says Ross, "to stand out of this dangerous inlet, in which we were embayed, being within it above

eighty miles." Captain Parry and Captain Sabine both say *thirty miles*. Since the period of this *dangerous inlet* being navigated by Parry, not less than four times, it has been visited annually by whalers, without danger, and without molestation by the ice. Nay, Ross himself had the courage—can it be called "moral courage ?"—to revisit, some years afterward, this horrible spot in a miserable kind of ship, fitted out at the expense of a private individual for some purpose or other, which ship, however, he left frozen up at the bottom of Regent's Inlet, and, with great fatigue and difficulty, succeeded in getting back to Lancaster Sound, and had the good luck to be picked up, in this "*dangerous inlet*," by a whaler—the very identical Isabella which he once commanded.

The unsatisfactory manner in which he hastened out of Sir James Lancaster's Sound, and ran past the Alexander, without the least communication with Lieutenant Parry, seems to have drawn from him a strange sort of something that he probably conceived to be a justification of his proceedings :

"As I have given a particular chart of the bay or inlet which was explored between the 29th of August and the 1st of September, by the expedition under my command, and as there will be found on the preceding pages copies of the meteorological logs of the two ships, which were supplied and *corrected* by the hydrographer of the Admiralty, from the official documents which were lodged in his office on the arrival of the ships, it must be unnecessary for me to recapitulate the facts which I have already stated, as, by referring to these authenticated documents, they will be seen by inspection. But it may not be amiss to point out the parts in my official instructions, which are printed in the beginning of this work, wherein I am directed to pay particular attention to the currents, and to be guided by them; and also to the part which recommends me to look for the north-east point of America, or, in other words, the northwest passage about the seventy-second degree of latitude. As it was fully proved that no current existed in this inlet, which we had just explored, or to the northward of it, it naturally followed that I should have supposed myself still to the northward of the current, which had been so confidently asserted to exist; and that, therefore, this inlet was not the place to persevere in forcing a passage, but that there was reason to

expect it would be found farther south. My orders, 'to stand well to the north,' had already been fully obeyed, and no current had been found; and if 'a current of some force' did exist, as from the 'best authorities' we had reason to believe was the fact, it could be nowhere but to the southward of this latitude. As, in my instructions, I am also directed 'to leave the ice about the 15th or 20th of September, or, at latest, the 1st of October,' I had only one month left for my operations, in which month the nights are long, and, according to a fair calculation, not more than two days' clear weather out of seven could be expected. It may, therefore, with propriety be stated that I had only eight days remaining to explore the remainder of Baffin's Bay, a distance of above four hundred miles. Of this space nearly two hundred miles had never been examined; a range including the supposed place of the discontinuity of the continent, and that to which my attention had been particularly called, and where the imaginary current, which was to be my guide, was to be expected. It is, perhaps, unnecessary to add that, under these circumstances, I was anxious to proceed to the spot where it must be evident I had the best chance of success. Yet my anxiety, on the other hand, to leave no part of the coast unexplored, even after all hopes of a passage were given up, determined me to persevere as I did, notwithstanding there was no current, a material decrease in the temperature of the sea, and no drift-wood, or other indication of a passage, until I actually saw the barrier of high mountains, and the continuity of ice, which put the question at rest. That I did so persevere became afterward a source of great satisfaction, as I was fortunate enough to succeed also in exploring every part of the coast to the southward to which my attention was to be directed, and where I was led to expect that the current was to be found. This was a much more essential part of my duty than the making of magnetical observations, which was the only inducement still remaining to linger in that dangerous bay, where much time might have been wasted in attempting to land, perhaps without success, or, at any rate, without attaining any adequate results. My opinions were mentioned to several of the officers after I had determined to proceed to the southward, and also to Captain Sabine, who repeated on every occasion that there was no *indication* of a passage."—P. 182–184.

This can only be looked upon as a pitiable excuse for running away home, and is a most clumsy perversion of his instructions, the obvious meaning of which he has not only misconceived, but misquoted. A spe-

cies of infatuation, with regard to currents, appears to have seized on his mind; he is forever hunting for, but never gets scent of, a current. The Lords of the Admiralty had merely suggested that if he should meet with a current, which, "from the best information" (not *authorities*, as he quotes) "we have been able to obtain, runs from the northward toward the upper part of Davis's Strait." And again, "In passing up the strait" (*of Davis*), "if *such a current should be discovered*, it will be of the greatest importance to you, as leading you direct to the opening by which it may be supposed to pass from the Arctic Sea into Davis's Strait." Again, "If it should come from the northwest or west, it will prove the best guide you can follow to lead you to the discovery of which you are in search."* His failure in the discovery of this *imaginary current* is so far a reflection on his sagacity, as every navigator, both before and after his time, who has entered Davis's Strait has experienced a current of considerable force setting down that strait; and it is now known that the water of the Polar Sea passes through several channels, and down the Sea of Spitzbergen into the Atlantic.

On taking leave of Lancaster Sound on the 31st of August, and proceeding homeward along the same coast, the following day Ross sent a boat on shore, in a small bay near Cape Byam Martin, with orders "to take possession of the country, in the name and on behalf of his Britannic majesty," with the usual silly ceremony —the more silly when the object is worthless, as in the present case—a barren, uninhabited country, covered with ice and snow, the only subjects of his majesty, in this portion of his newly-acquired dominions, consisting of half-starved bears, deer, foxes, white hares, and such other creatures as are commonly met with in these regions of the globe. Lieutenant Parry had command of the shore party, and obtained what are said to be "some valuable specimens, and the officers of both ships were equally active and zealous." The whole of this coast, that is to say, from latitude 73° 37′ to latitude 62° 51′, down to Cumberland Strait, is peopled abundantly on the chart with great but unprolific names, chiefly

* Admiralty Instructions.

from Scotland; and, among the rest, the territory is divided into a couple of Scotch counties. That he did not obtain "a perfect geographical survey of this coast was" (as he says) "of the less importance, from its not being the main object of the expedition." A boat, however, was once more sent to take possession of a small island, which was named Agnes's Monument; and a large iceberg being seen about the distance of seven leagues from the said island, Lieutenant Parry, Mr. Ross, and Mr. Bushnan, with a party, were dispatched to make observations of it and upon it. Having landed (if it may be so called) with some difficulty, they ascended this iceberg, found the top flat, and a large white bear in quiet possession, who, not desirous to engage the invaders, quietly walked off to the opposite side, and gave a plunge into the sea over a precipice fifty feet high. Parry reported that he found this iceberg to be four thousand one hundred and sixty-nine yards long, three thousand eight hundred and sixty-nine yards broad, and fifty-one feet high, aground in sixty-one fathoms, and that it had nine unequal sides.

On the 1st of October, when in latitude 62° 51′, no land to the westward being in sight, Commander Ross had no doubt that the opening was Cumberland Strait—that strait which alone, of all others on this coast, afforded hopes of a passage. "However," the commander says, "we crossed the entrance of Cumberland Strait, and steered south-southeast;" that is, we turned our backs upon it, left it unmolested, and steered direct for England; and Captain Sabine gave no sign, no indication about currents and drift-wood, and swell from the northward;* but Ross does give a reason, and a sufficient one, had he not spoiled it by a total misconstruction, as usual, of his instructions. He says, "As the 1st of October was the latest period which, by my instructions, I was allowed to continue on this service, I was not authorized to proceed up this strait to explore it." The real drift, intention, and meaning of the instruc-

* Without giving a direct contradiction to Commander Ross's statement regarding Captain Sabine's opinion of Lancaster Sound, it was thought better to leave that to Captain Sabine himself, to deal with as he might think proper.

tions are, that, after giving up all farther search for a passage, as he had now done, he was not to remain in *Davis's Strait* so long as to be caught in the ice, and obliged to winter on any part of the eastern coast of America or the western coast of Old Greenland, but to leave the ice on the 20th of September or the 1st of October.*

Without entering into any detail of scientific observations made on this voyage, and collections for adding to the natural history of the Arctic regions, the several appendices, amounting to upward of one hundred and forty pages, will afford all the information gained, and which, though meager enough, considering the very limited and restricted means afforded by boats for the attainment of it, displays a considerable share of talent, attention, and industry by the several respective officers of both ships, who have given full proof how much more would have been accomplished had more frequent opportunities been afforded to them. The *names* of individual observers and collectors are always given by the commanding officer of expeditions of this nature; that of Ross forms an exception.

Commander John Ross was promoted to the rank of captain in December, 1818, on paying off the ships; and, singular enough, no other officer appears to have been promoted, not even Parry, who commanded the second ship, and who was not only suffered to remain a lieutenant, but was sent out the following year, with two ships under his command, on a similar expedition, still as lieutenant, with instructions addressed to "Lieutenant William Edward Parry, commanding."

Among the little irregularities of Commander Ross, it can not escape notice that he addresses all his letters and orders issued during the voyage, and unnecessarily printed in his book, as from John Ross, *captain* of the Isabella. His promotion to that rank on his return was easily acquired, being obtained by a few months' voyage of pleasure round the shores of Davis's Strait and Baffin's Bay, which had been performed centuries ago, and somewhat better, in little ships of thirty to fifty tons. It is a voyage which any two of the Yacht Club

* Admiralty Instructions.

would easily accomplish in five months, and during that time might run far enough up Sir Thomas Smith's Sound to ascertain the insularity, or otherwise, of Old Greenland. There are, among the members of that club, gentlemen sufficiently high-spirited to undertake to solve that national question, and prove the accuracy of old Burleigh, and thus remove a *blot* from the geography of Northern Europe, for a part of that division of the globe Greenland is now ascertained to be. There is nothing to be apprehended from the severity of the temperature. During the three or four months that the ships of the present voyage were in the Arctic seas, the thermometer never fell below $26\frac{1}{2}°$; the general average was between 35° and 37°: no deaths took place, and scarcely a day's illness. Parry, by anticipation, doubts not that a ship, provided with sufficient food, warm clothing, and fuel, "might winter in the highest latitudes we have been in without suffering materially either from cold or disease." He very soon proved it to be so.

In taking leave of Ross, it may be stated that the observations made on his strange conduct have relation only to his unfitness for conducting the voyage of discovery, where science and accuracy were indispensable. In practical seamanship it is understood and admitted that he is sufficiently well skilled, as may be inferred from Sir George Hope's recommendation, as well as from the nature of his early and various services in ships of war in the Baltic, in merchant ships, and in ships trading to the East Indies.

CHAPTER III.

CAPTAIN DAVID BUCHAN.

1818.

A Voyage of Discovery toward the North Pole, performed in his Majesty's ships Dorothea and Trent, under the Command of Captain DAVID BUCHAN, 1818. *To which is added a Summary of all the early attempts to reach the Pacific by way of the Pole. By Captain* F. W. BEECHEY, *one of the Lieutenants of the Expedition.*

THE two ships appropriated to this service were the Dorothea and the Trent, commanded, officered, and manned as under:

DOROTHEA.	TRENT.
David Buchan, Captain.	John Franklin, Lieutenant and Commander.
Arthur Morell, Lieutenant.	Frederic Beechey, Lieutenant.
John Duke, Surgeon.	William Barrett, Purser.
John Jermain, Purser.	Andrew Reid, Admiralty Mate.
George Fisher, Astronomer.	George Back, do. do.
Charles Palmer, Admiralty Mate.	Alex. Gilfillan, Assist. Surg.
Wm. J. Dealy, do. do.	William Castell, Clerk.
Wm. G. Borland, Assist. Surg.	George Fife, Greenland Master.
Cyrus Wakeham, Clerk.	George Kirby, do. Mate.
Peter Bruce, Greenland Master.	James Bowden, Carpenter.
George Crawford, do. Mate.	
Thomas Hebron, Carpenter.	
12 Officers.	10 Officers.
43 Seamen and Marines.	28 Seamen and Marines.
55 Total complement.	38 Total complement.

CAPTAIN DAVID BUCHAN was an active and enterprising officer, who for several years had been accustomed to the navigation of the icy seas in the neighborhood of Newfoundland, and received his promotion to the rank of commander in 1816, for his zeal and good conduct on that station. He also made a land journey over ice and snow nearly across the island, in order to procure an interview with the native islanders, he being the first European that ever ventured to go among them. On his return from the present expedition, he was appointed in 1820 to the Grasshopper, in which ship he returned to Newfoundland, and served on that station till 1823, when he was promoted to the rank of captain. In coming

from India he was lost in the Upton Castle, a ship that was never heard of after the 8th of December, 1838.

Lieutenant Franklin entered the navy in early life as midshipman of the Porpoise, one of the ships employed by Captain Flinders on the survey of the coasts of Australia, and was wrecked in her. Next in the Polyphemus as midshipman and master's mate, from 1801 to 1808, and was in the fleet with Nelson at the battle of Copenhagen. He was next appointed acting-lieutenant in the Bedford; and was lieutenant of the Bellerophon in the battle of Trafalgar in 1805, and also in the Bedford in the attack on New Orleans in 1815, where he commanded in the boats, was wounded, gazetted, and highly spoken of. He was promoted to the rank of captain in 1822, on returning from his first land Arctic expedition. He was considered a good nautical surveyor, well versed in the use of instruments, and a thorough seaman. In 1821 he was made commander.

Lieutenant Morell was promoted to the rank of commander in 1828, and appointed commander of the Tortoise store-ship at Ascension in 1844, where he now is.

Lieutenant Frederic Beechey, the son of the eminent artist, went through his probation in the naval service with great credit. In 1806, at ten years of age, he entered Lord St. Vincent's flag-ship, and served in various ships; was engaged as mate in several actions; and was in the Vengeur, and employed in the boats at the attack of New Orleans in 1815, and made lieutenant in that year. As might be expected, he was skilful as a draughtsman, which he practiced on the present voyage with great success, as the prints in his book testify. We next find him as lieutenant of the Hecla, in Parry's first voyage, in which he was fully employed as draughtsman and surveyor; also in assisting in all the requisite observations. Being of an active and enterprising mind, he was next employed, in the years 1821 and 1822, to survey and examine, in company with his brother, the north coast of Africa, from Tripoli eastward, comprehending the Greater Syrtis and Cyrenaica and the ancient cities composing the Pentapolis. In January, 1825, he was appointed commander of the Blossom, destined

for a voyage to the Pacific and Behring's Strait, with instructions, among other things, to co-operate with the Polar land expeditions; to keep the Blossom, however, in open water, and not to risk her being beset in the ice. Finding in Kotzebue Sound the sea clear of ice, all hands on board were most anxious to try for a northeast passage, but his instructions did not admit of it. He did all he could, which was, to send his master, Elson, in the decked lanch, in which he proceeded along the coast of America, until impeded by a neck of land running to the northward, and encumbered with ice. In 1827 Beechey was made captain, while on this service, in which he remained to the year 1828, and published a very clever book on the shores and islands of the Pacific. He has since been employed in various surveying duties, in which he has greatly distinguished himself, and has been for some years past, and still is, employed in conducting the survey of the coasts of Ireland, and the west coast and islands of Scotland.

Charles Palmer and W. J. Dealy, then acting-mates, were promoted to lieutenants in 1821, and remain still in the same rank.

Andrew Reid was promoted at the same time; went with Parry on his first and second voyages, and still remains on the list of lieutenants.

George Back followed up the service from his first entry, but has been mostly employed on land expeditions, and has highly distinguished himself by his active, zealous, and vigorous conduct, on various occasions of great difficulty and peril, having contributed mainly, and at the risk of his own life, to save those of his fellow-travelers, Franklin and Richardson. For these and other services, which will be pointed out, he was advanced to the rank of captain, and received the honor of knighthood. Compare the progress thus made, by adhering to the service, with the stationary position of his superior comrade in this present voyage, and the conclusion to be drawn is evident.

George Fisher was employed on Parry's second voyage as chaplain and astronomer, and proved himself a valuable and useful officer: he is now chaplain and head master of the Greenwich Hospital Naval Schools.

The narrative of this voyage comes forth under peculiar circumstances, and was not published until the year 1843, twenty-five years after it was performed contemporaneously with that under Commander Ross, who proceeded to the northwest, while the destination of this was to the northeast.

Its publication, as already stated, came out under different circumstances from that of Ross. Commander Buchan, from ill health it is said, declined to bring out any account of the voyage—rather from immediate and active employment, it may be suspected; but there was another reason, as we learn from Captain Beechey. "Captain Buchan abstained from publishing his own journal, from a feeling that the matter it contained was not of sufficient interest to engage the attention of the general reader;" and Beechey farther says, "I regret also that my immediate commander, Sir John Franklin, has not had leisure to attend to the publication of a voyage in which he bore so conspicuous a part." *He*, too, it may be suspected, declined from a feeling of delicacy, so long as the commander of the expedition was living, and might consider the time gone by after his death. Lieutenant Beechey having preserved materials for arranging into the shape of a journal at some future time, and having put them in order, submitted it to Captain Buchan, who returned it with this observation: That "all the most prominent features of the expedition were brought forward in perfect accordance with his views:" and he adds, "My only regret in not having published the proceedings of our attempt to reach the Pole, is the privation of making the public acquainted with my entire approbation of the conduct of the officers and seamen I had the honor to command."

What delayed the appearance of the narrative of a voyage made in 1818 to the year 1843, Captain Beechey does not say; it could not be diffidence of his talent for writing, as he had long before published a voyage in the Pacific and to Behring's Strait, a well-written volume of 700 pages. It appears, indeed, that the public would not have had the present work at all but for the persuasion of a friend, who casually saw and read the manuscript when taking a little trip in the vessel he com-

manded in the Irish Channel. This friend* found it to be interesting, and, as the produce of a voyage set forth by government, he advised him, and absolutely compelled him, as it were, to publish it, and for that purpose took it with him to London. It is a well-written and interesting narrative, disencumbered of the frequent recurrence of nautical remarks and observations, which are not always understood or relished by the general reader; and it contains lively descriptions of the manners and habits of the various living creatures that abound on the shores of Spitzbergen, its seas, and islands of ice; and they are given in so clear and lucid a manner, without the technicalities peculiarly employed in the description of objects of natural history, that the book is suited for all classes, and may be recommended as a model for future voyagers.

Though this expedition, like that of Ross, was a failure in its main object, yet, unlike the other, it was not owing to any want of exertion, zeal, or intelligence in the two commanders or officers; on the contrary, the two ships were supplied with some of those who, in future voyages, so greatly distinguished themselves as to obtain the highest steps of promotion, and to receive honorary rewards. Need the names of Franklin and Back be mentioned?

The instructions directed that they were to make the best of their way into the Spitzbergen seas, where they should endeavor to pass to the northward, between Spitzbergen and Greenland, without stopping on either of their coasts, and use their best endeavors to reach the North Pole; with a suggestion, that where the sea is deepest and least connected with the land, it will be found most clear of ice. Their instructions on objects of scientific inquiry on the voyage, and particularly on those to be noticed on and about the Pole, are carefully drawn up and in great detail, the latter part of which were unfortunately not called into practice. The other portions of a general nature appear to have been carefully attended to and well described by Lieutenant Beechey, who introduces his reader into the Greenland Sea in noticing the interest taken by those who, for the

* Mr. John Barrow.

first time, witnessed the ship working its way among floating masses of ice, and who viewed the bright sun darting its oblique rays among them at midnight, conveying to the eye, assisted by the imagination, and by the lights and shadows, the appearance of "architectural edifices, grottoes, and caves, here and there glittering as if with precious metals;" so that, he says, "it was usual to deviate from nautical phraseology, and shape a course for a church, a tower, or bridge, or some similar structure, in the lumps of ice."

So early as the 24th of May the expedition had reached Cherie Island, in latitude 74° 33′, so called by Stephen Bennet, in 1603, on or near which the walruses were so numerous, that not fewer than nine hundred or a thousand of those large animals were captured, in the short space of seven hours, by the crew of a single vessel. Of the habits and character of the walrus, Lieutenant Beechey gives, after frequent intercourse with them, a very interesting account. Their affection for their young, and their unflinching courage in defending them, are remarkable; not more so their compassionate conduct toward a wounded companion, whom they will never leave till carried off to a place of safety; and even the young ones on such occasions will turn fiercely against the boats of the pursuers. Although one of these animals was brought alive to England in 1608, as we learn from Purchas, yet it was but the other day that the British Museum could boast even of a stuffed specimen. Why should not the Zoological Society offer a price for a living one to keep the white bear company? They could easily get one. A single instance will suffice to show the care and affection bestowed on their young.

"We were greatly amused by the singular and affectionate conduct of a walrus toward its young. In the vast sheet of ice that surrounded the ships there were occasionally many pools; and when the weather was clear and warm, animals of various kinds would frequently rise and sport about in them, or crawl from thence upon the ice to bask in the warmth of the sun. A walrus rose in one of these pools close to the ship, and, finding every thing quiet, dived down and brought up its young, which it held by its breast by pressing it with its flipper. In this manner it moved about the pool, keeping

in an erect posture, and always directing the face of the young toward the vessel. On the slightest movement on board, the mother released her flipper and pushed the young one under water; but, when every thing was again quiet, brought it up as before, and for a length of time continued to play about in the pool, to the great amusement of the seamen, who gave her credit for abilities in tuition which, though possessed of considerable sagacity, she hardly merited."—P. 80, 81.

On the 28th of May, the weather being foggy and severe, with heavy falls of snow, the ships separated, and the Trent stood to the northward toward Magdalena Bay, the place of rendezvous, along the edge of the main body of ice; they met here, and seeing it impossible to penetrate the marginal line of the ice, and the season being very early, the commander determined on passing a few days in that bay, in which they anchored on the 3d of June. The ice was in the cove and upper part of the harbor, but was in a rapidly decaying state, and, on revisiting their anchorage here in the beginning of August, it had entirely disappeared. Magdalena Bay is rendered conspicuous by four glaciers, the smallest two hundred feet above the sea, on the slope of a mountain. It is called the Hanging Iceberg, and seems, so Beechey says, as if a very slight matter would detach it from the mountain and precipitate it into the sea. The largest of the four extends two or three miles inland: owing to the great rents in the surface, it has been named the Wagon-way, from the resemblance of the fissures to ruts made by wheels. Several glaciers similar to those were observed near Dane's Gut, the largest about ten thousand feet in length by two or three hundred feet in perpendicular height. In the vicinity of these icebergs a strict observance of silence is necessary; the explosion of a gun scarcely ever fails to bring down one of these masses. Mr. Beechey says that on two occasions they witnessed avalanches on the most magnificent scale.

"The first was occasioned by the discharge of a musket at about half a mile's distance from the glacier. Immediately after the report of the gun, a noise resembling thunder was heard in the direction of the iceberg (glacier), and in a few

seconds more an immense piece broke away, and fell headlong into the sea. The crew of the lanch, supposing themselves beyond the reach of its influence, quietly looked upon the scene, when presently a sea arose and rolled toward the shore with such rapidity, that the crew had not time to take any precautions, and the boat was in consequence washed upon the beach, and completely filled by the succeeding wave. As soon as their astonishment had subsided, they examined the boat, and found her so badly stove that it became necessary to repair her in order to return to the ship. They had also the curiosity to measure the distance the boat had been carried by the wave, and found it to be ninety-six feet." —P. 155, 156.

In viewing the same glacier from a boat at a distance, a second avalanche took place, which afforded them the gratification of witnessing the creation, as it were, of a sea iceberg, an opportunity which has occurred to few, though it is generally understood that such monsters can only be generated on shore.

"This occurred on a remarkably fine day, when the quiet ness of the bay was first interrupted by the noise of the falling body. Lieutenant Franklin and myself had approached one of these stupendous walls of ice, and were endeavoring to search into the innermost recess of a deep cavern that was near the foot of the glacier, when we heard a report as if of a cannon, and, turning to the quarter whence it proceeded, we perceived an immense piece of the front of the berg sliding down from the height of two hundred feet at least into the sea, and dispersing the water in every direction, accompanied by a loud, grinding noise, and followed by a quantity of water, which, being previously lodged in the fissures, now made its escape in numberless small cataracts over the front of the glacier."—P. 156, 157.

After describing the disturbance occasioned by the plunge of this enormous fragment, and the rollers which swept over the surface of the bay, and obliged the Dorothea, then careening at the distance of four miles, to aright, by releasing the tackles, he thus proceeds:

"The piece that had been disengaged at first wholly disappeared under water, and nothing was seen but a violent boiling of the sea, and a shooting up of clouds of spray, like that which occurs at the foot of a great cataract. After a short time it reappeared, raising its head full a hundred feet above the surface, with water pouring down from all parts of

it; and then laboring as if doubtful which way it should fall, it rolled over, and, after rocking about some minutes, at length became settled.

"We now approached it, and found it nearly a quarter of a mile in circumference, and sixty feet out of the water. Knowing its specific gravity, and making a fair allowance for its inequalities, we computed its weight at 421,660 tons. A stream of salt water was still pouring down its sides, and there was a continual cracking noise, as loud as that of a cart-whip, occasioned, I suppose, by the escape of fixed (confined) air."—P. 157, 158.

Mr. Beechey confirms what has frequently been found and noticed—the mildness of the temperature on the western coast of Spitzbergen, there being little or no sensation of cold, though the thermometer might be only a few degrees above the freezing point. The brilliant and lively effect of a clear day, when the sun shines forth, with a pure sky, whose azure hue is so intense as to find no parallel even in the boasted Italian sky, affords, in Mr. Beechey's opinion, a full compensation for the cloudy and misty weather, when the hills are clothed with new-fallen snow, and all appears dreary and desolate. The radiation of the sun, he observes, in some sheltered situation, is so powerful during two hours on either side of noon, that they frequently observed the thermometer upon the ice in the offing at 58°, 62°, 67°; and once at *midnight* it rose to 73°, although in the shade at the same time it was only 36°. Hence are found varieties of Alpine plants, grasses, and lichens, such as in the more southern aspects flourish in great luxuriance: they are here found ascending to a considerable height, "so that," says Beechey, "we have frequently seen the reindeer browsing at an elevation of fifteen hundred feet."

On account of the mildness of the temperature, the shores of Spitzbergen are frequented by multitudes of animals of various descriptions. "From an early hour in the morning until the period of rest returned the shores around us reverberated with the merry cry of the little auk, willocks, divers, cormorants, gulls, and other aquatic birds; and wherever we went, groups of walrusses, basking in the sun, mingled their playful roar with the husky bark of the seal." The little auks or rotges

(the *Alca alle*) are stated to be so numerous, that "we have frequently seen an uninterrupted line of them extending full half way over the bay, or to a distance of more than three miles, and so close together that thirty have fallen at one shot. This living column might be about six yards broad and as many deep; so that, allowing sixteen birds to a cubic yard, there would be four millions of these creatures on the wing at one time."—P. 46.

This number, he adds, appears very large; yet, when it is told that the little rotges rise in such multitudes as to darken the air, and that their chorus is distinctly audible at a distance of four miles, the estimate will not appear to be exaggerated. In fact, their numbers dwindle into a small figure when compared with Audubon's passenger-pigeon, on the banks of the Ohio, which, estimated on the wing at one time, he makes 1,115,000,000 and upward. Too much confidence ought not to be placed on calculations such as these.

At Vogel Sang and Cloven Cliff, between which is Fair Haven, wherein the ships anchored, the surrounding islands are described as clothed with lichens and other rich pasturage for reindeer, which creatures are here so abundant (upon Vogel Sang in particular), that this island alone supplied the expedition with forty carcasses in high condition, the fat on the loins being from four to six inches thick, and a carcass prepared for dressing weighing two hundred and eighty-five pounds. These fine creatures showed evident marks of affection for each other. "They were at this time in pairs, and when one was shot the other would hang over it, and occasionally lick it, apparently bemoaning its fate; and, if not immediately killed, would stand three or four shots rather than desert its fallen companion." "This compassionate conduct," continues Beechey, "it is needless to say, doubled our chance of success, though I must confess it was obtained in violation of our better feelings." These animals are said to take to the water freely, and swim from one island to another. The boats of the Trent took four, which they wished to retain alive; but they were so wild that they broke their slender limbs, and inflicted other serious wounds, so that it became necessary to put an end to their sufferings by killing them.

At one of the islets near Vogel Sang were also the King Eider ducks, in such numbers that it was impossible, almost, to walk without treading on their nests, which they defended with determined resolution. If driven off by foxes or other large animals, they hastily draw the down of the nest over the eggs, and glue it with a yellow fluid, not only to preserve the warmth of the eggs, but that, being of so offensive a nature, the foxes would not touch the eggs tainted with it. Foxes and bears are everywhere found on the shore and on the ice; and the sea about Spitzbergen is as much alive as the land, from the multitude of burgermesters, strontjaggers, malmouks, kittiwakes, and the rest of the gull tribe, while the amphibious animals and the fish enliven both the ice and the water, from the huge whale to the minute clio on which it feeds, swallowing perhaps a million at a mouthful. In this respect of animal life, the Arctic regions of the globe essentially differ from those within the Antarctic Circle, where all appears to be stillness, silence, and solitude.

On the 7th of June the ships left Magdalena Bay, and were hampered with fragments of ice, usually called *brash-ice*, which, as they proceeded, became thicker and more solid, and, indeed, impenetrable; but a breeze opened and dispersed it, and carried the ships into clear water. In going westerly they fell in with several whale ships, by which they learned that the ice in that quarter was quite compact, and that fifteen vessels were beset in it. Buchan, therefore, stood to the northward. They passed Cloven Cliff—a remarkable, isolated rock, which marks the northwestern boundary of Spitzbergen—and also Red Bay, when they were stopped by the ice closing the channel between it and the shore, and became firmly fixed. By great exertions, however, they got into the floe of ice, where they remained thirteen days, when the field began to separate, and to set to the southward, at the rate of three miles an hour, and the ships got into an open sea, where, however, they were not long permitted to remain, and took shelter in Fair Haven.

Finding, from the view afforded by the hills, that the ice was driving to the northward, they again put to sea on the 6th of July, and sailed as far as 80° 15′ N., where

the same impenetrable barrier obstructed their farther progress. On the following day, however, so rapid had been the motion of the ice during the night, that channels of water were observed in every quarter, and the wind was favorable for proceeding along one of the open channels. Captain Buchan lost not a moment in pushing his ship into one of these openings, spreading every sail his masts would bear, and was cheerfully followed by his enterprising consort, to the great joy of all on board. In the evening, however, the channels began to close again, and the vessels were soon beset and pressed close by the packed ice. This was the end of their voyage northward, and the latitude gained was 80° 34′ N. In vain they labored two days in dragging the vessels with ropes and ice-anchors; for, though they had left the ice behind them, the current had carried them back to the southward three miles, and it was clear that all attempts to get one mile farther to the northward would be vain.

Captain Buchan being now satisfied that he had given the ice a fair trial in the vicinity of Spitzbergen, resolved on standing over toward the coast of Greenland. Having succeeded in getting the ships to the edge of the pack, and sailing along it, a violent gale of wind came on so suddenly that they were at once reduced to storm-staysails. The ice was setting fast upon them, and the Dorothea being nearest to it, in order to escape immediate shipwreck, it was deemed necessary to take refuge among it. The Trent followed her example, and dashed into the "unbroken line of furious breakers, in which immense pieces of ice were heaving and subsiding with the waves, and dashing together with a violence which nothing, apparently, but a solid body could withstand, occasioning such a noise that it was with the greatest difficulty we could make our orders heard by the crew." "No language," he says, "I am convinced, can convey an adequate idea of the terrific grandeur of the effect now produced by the collision of the ice and the tempestuous ocean."

But when the moment arrived that the strength of the little bark was to be placed in competition with that of the great icy continent, and doubts might reasonably have arisen of her surviving the unequal conflict, the

crew preserved the greatest calmness and resolution. Captain Beechey says:

"If ever the fortitude of seamen was fairly tried, it was assuredly not less so on this occasion; and I will not conceal the pride I felt in witnessing the bold and decisive tone in which the orders were issued by the commander of our little vessel (Franklin), and the promptitude and steadiness with which they were executed by the crew. Each person instinctively secured his own hold, and, with his eyes fixed upon the masts, awaited in breathless anxiety the moment of concussion. It soon arrived; the brig, cutting her way through the light ice, came in violent contact with the main body. In an instant we all lost our footing, the masts bent with the impetus, and the cracking timbers from below bespoke a pressure which was calculated to awaken our serious apprehensions."—P. 123, 124.

Captain Beechey proceeds to give a most formidable account of the state of the ship, accompanied by a terrific and well-executed print, descriptive of her situation. "Her motion," he says, "was so great that the ship's bell, which in the heaviest gale of wind had never struck of itself, now tolled so continually that it was ordered to be muffled for the purpose of escaping the unpleasant association it was calculated to produce." After a few hours the gale ceased, and the pack broke up sufficiently to release the ships, which were so disabled that the Dorothea was in a foundering condition. They made the best of their way to Fair Haven in a sinking state, where they repaired their damages as well as they could; it was obvious, however, there was an end to any farther attempt as regarded the main object of the expedition. The Trent being the less damaged of the two, Lieutenant Franklin requested that he might be allowed to proceed alone in the execution of the service. This could not be acceded to, as, in the event which had occurred, Captain Buchan was directed by his instructions to take command of the Trent, provided her consort was rendered unserviceable; had he done so, the Dorothea, unaccompanied in her way home, might have risked the lives of her crew in a ship so shattered and unsafe. It was therefore decided that both should return home; and on the 30th of August they put to sea, and on the 22d of October arrived at Deptford.

CHAPTER IV.

PARRY'S FIRST VOYAGE.

1819, 1820.

Journal of a Voyage for the Discovery of a Northwest Passage from the Atlantic to the Pacific. By W. E. PARRY, *Commander of the Expedition.*

THE two ships appointed for this service were the Hecla, a bomb of 375 tons, and the Griper, a large gun-brig of 180 tons, raised upon; and they were commanded, officered, and manned as under:

THE HECLA.

Wm. Edw. Parry, Lieut. Commg.
Capt. E. Sabine, Astronomer.
F. W. Beechey, Lieutenant.
John Edwards, Surgeon.
W. H. Hooper, Purser.
Alexander Fisher, Assist. Surg.
Joseph Nias, Wm. J. Dealy, Charles Palmer, Jas. Clarke Ross, John Bushnan, } Midshipmen.
James Hulse, Clerk.

12 Officers.
16 { Gunner, Boatswain, Carpenter, Greenland Master, Greenland Mate, Cook, 4 Leading Men, Quarter Master, Gunner's Mate, Boatswain's Mate, Carpenter's Mate, Armorer's Mate, Sailmaker. }
22 Able Seamen.
8 Marines, including 2 Serjeants.
58 Total on board.

THE GRIPER.

Matthew Liddon, Lieut. Commg.
H. Perkyns Hoppner, Lieutenant.
Chas. Jas. Beverley, Assist. Surg.
Andrew Reid, A. M. Skene, W. Nelson Griffiths, } Midshipmen.
Cyrus Wakeham, Clerk.

7 Officers.
12 Warrant and Petty Officers.
12 Able Seamen.
5 Marines.
36 Total on board.

The most remarkable feature in this expedition is, that LIEUTENANT PARRY, having been selected to the command of it for the purpose of carrying into effect the instructions which Ross, from misapprehension, indifference, or incapacity, had failed to do, should have been sent out as a lieutenant only, in which rank he continued for nearly two years before he obtained that of

commander; while the latter, for an unprofitable voyage of seven summer months, was advanced at once to the rank of captain—why, is best known to those who conferred it. Again: Lieutenant Parry proceeded on this second voyage of discovery with the rank or title only of *lieutenant commanding*, and did not obtain the next step till the 8th of November, 1820, being then absent. On the same day, and while in the service of the expedition, Lieutenant Liddon, his second in command, was also made commander, in which rank he still remains on the list of naval officers.

Lieutenant Beechey's services have already been mentioned; and Hoppner continued to serve as lieutenant in the Hecla on Parry's second voyage, and on the third was appointed commander of the second ship, the Fury.

Nias and Reid were promoted to the rank of lieutenants on the second voyage, and served in Parry's ship.

Skene, Ross, and Bushnan were in the first voyage, and so were Alexander Fisher, assistant surgeon, and James Hulse, clerk.

There can be but one opinion as to the view in which the report of Captain Ross was considered by the Board of Admiralty, were it to be inferred only from the instructions given to his successor, Lieut. William Edward Parry, in which the examination of the great and open bay, Sir James Lancaster's Sound, was ordered to be considered as the *first* and *most particular object* of his voyage; and, moreover, not succeeding in that direction, to examine Alderman Jones's Sound and that of Sir Thomas Smith, neither of which had been examined, nor even entered, by the commander of the late expedition.

The two ships ordered to be fitted out for this expedition—the Hecla, a bomb of 375 tons, and the Griper, a gun-brig—were taken into dock for repairs and strengthening, and the Griper to be raised as early as the middle of December; and on the 16th of January, 1819, Lieutenant Parry was appointed to the command of the former and of the expedition, and Lieutenant Liddon to the latter. The subordinate lieutenants of the two ships were, F. W. Beechey to the Hecla, and H. P. Hopp-

ner to the Griper, both having served on the late expedition; five midshipmen to the former ship, Nias, Dealy, Palmer, Clarke Ross, Bushnan; and to the latter, three, Reid, Skene, and Nelson Griffiths. Captain Sabine, of the Royal Artillery, joined the expedition as astronomer, and to have charge of the magnetical observations to be made on the voyage. The Hecla had a surgeon, an assistant surgeon, and a purser; the Griper an assistant surgeon and a clerk. The narrative of this voyage has supplied, for the interests of science and geography, numerous and important facts and observations, and, above all, has opened the door to the discovery of the main object, the Northwest Passage. "In this work," it has been said, "we find no display of self-importance, no attempt to deceive, or to throw dust in the eyes of the public; no marvelous stories to disgust or confound, and make the ignorant stare; no figures set down at random; no chart-lines drawn *ad libitum;* no representations of objects the mere fancies of the brain; but, on the contrary, a plain statement of facts and occurrences, and a detail of scientific observations, made with unimpeachable accuracy, and recorded in the clearest and most simple and unaffected language."

On the 11th of May the ships left the river, and on the 28th of June were about the middle of the entrance into Davis's Strait, proceeding to the northward along the edge of the ice, and between it and the western coast of Greenland, and on the 3d of July crossed the Arctic Circle, having on that day passed at least fifty icebergs of large dimensions; and on the following day a more extended chain of a larger size, against which a heavy southerly swell was violently agitated, "dashing the loose ice with tremendous force, sometimes raised a white spray over them to the height of more than one hundred feet, and, being accompanied with a loud noise exactly resembling the roar of distant thunder, presented a scene at once sublime and terrific." Between one of these icebergs and a detached floe, drifting with a southerly current, the Hecla had nearly, as the whalers call it, been "nipped," that is to say, squeezed flat. The berg was about one hundred and forty feet high, and aground in one hundred and twenty fathoms, so that its whole height probably exceeded eight hundred feet.

On the 21st the land called, by Davis, "Hope Sanderson," and also the "Woman's Island," were seen; and "we found ourselves," says Parry, "in the midst of a great number of very high icebergs, of which I counted, from the crow's nest, eighty-eight, besides many smaller ones."

Having now reached the latitude of 73°, and being unwilling to pass the latitude of Lancaster Sound, Parry determined to make an attempt to pass through the icy barrier in order to get into the open sea, which the experience of the former voyage induced him to believe he should find on the opposite coast; it took him, however, seven days' sailing, tracking and warping occasionally, to get into open water, the width of the barrier being not less than eighty miles; but the navigation among fields and floes of this kind is more tedious than dangerous. Having got into the open stream, the water here was found to have deepened so much that no bottom was obtained with three hundred and ten fathoms of line, no ice in any direction, and the temperature of the water had risen from 31° to 37°. Whales, too, were abundant, no less than eighty-two large ones being counted in the course of the day.

Parry observes, that "if any proof were wanting of the value of local knowledge in the navigation of the Polar Seas, it would be amply furnished by the fact of our having now reached the entrance of Sir James Lancaster's Sound just one month earlier than we had done in 1818, although we had then sailed above a fortnight sooner, with the same general object in view, namely, to penetrate to the western coast of Baffin's Bay, where alone the northwest passage was now supposed to be sought for and found." He omits, however, one important cause of his early approach to Lancaster Sound—that of taking the shortest route, instead of circumnavigating Baffin's Bay. On the 31st a party landed at the spot they had visited the preceding year, when Lancaster Sound was abandoned. The flag-staff was still standing; the ground free from ice or snow; the marks of their shoes as fresh as if imprinted but a few days before—a circumstance which led Parry to conclude that little or no sleet or snow had fallen since his former visit.

On the 1st of August the ships entered upon that portion of the voyage which was to determine the success or failure of the expedition—that magnificent piece of water called Sir James Lancaster's Sound. An easterly breeze and a crowd of sail carried the ships rapidly to the westward. On the morning of the 2d, it being calm, soundings were taken with the deep sea clams, and one thousand and fifty fathoms by the line were found; but the drift being considerable on account of the swell, Parry believes that the depth of water did not exceed eight or nine hundred fathoms. The sea was open before them, free from ice and land. Lieutenant Parry says,

"It is more easy to imagine than to describe the almost breathless anxiety which was now visible in every countenance, while, as the breeze increased to a fresh gale, we ran quickly up the sound. The mast heads were crowded by the officers and men during the whole afternoon; and an unconcerned observer, if any could have been unconcerned on such an occasion, would have been amused by the eagerness with which the various reports from the crow's nest were received, all however hitherto favorable to our most sanguine hopes."—P. 31.

They were soon relieved from their anxiety respecting the supposed continuity of land, which had been stated in the most peremptory manner to extend across the bottom of this magnificent inlet in which they were sailing; having reached the longitude of 83° 12′, the two shores here, the north and south, were still thirteen leagues apart, without the slightest appearance of any land to the westward of them. They had now advanced to what Parry has called Barrow's Strait, previous to which, however, he had named a large opening on the northern shore Croker's Inlet, "being anxious to seize," says a waggish critic, "as it would seem, the earliest opportunity of making some compensation for having transformed, as with a touch of Harlequin's wand, the magnificent and insuperable range of mountains which a former expedition had assigned to one Secretary of the Admiralty, into a broad and uninterrupted passage, bearing the name of the other Secretary." "We now began to flatter ourselves," says Parry, "that we had fairly entered the Polar Sea, and some of the most sanguine

among us had even calculated the bearing and distance of Icy Cape, as a matter of no very difficult or improbable accomplishment."

But in an icy sea, and more especially in narrow passages interrupted by islands, great uncertainty must always prevail. Having passed Barrow's Strait, a small island occurred, between which and the shore to the northward a floe of ice was found to extend. As this floe blocked up the passage to the westward, and they here noticed a large opening that appeared on the southern coast, Parry thought it better to proceed to the examination of it than to remain for an indefinite period idle in the western passage. It was found to be ten leagues wide at the mouth, and no land visible in the line of its southern direction. He stood down an open channel of water on the eastern side along the edge of ice that occupied the middle of the strait, and hopes were entertained that it might lead them nearer to the coast of America than Barrow's Strait, and if so, to a lower degree of latitude, in which it might be advantageous to make their passage to Behring's Strait. And as the inlet increased in width as they proceeded to the southward, it was calculated to raise their hopes on this score; but, to their great disappointment, the disappearance of land to the southwest, and its place supplied by a barrier of ice beyond which no water was in sight, determined Parry to return to Barrow's Strait. To the inlet he left he gave the name of Prince Regent, having entered it on his royal highness's birthday, the 12th of August. To a bay on its eastern shore he gave the name of Port Bowen. The latitude of the southernmost point to which he had proceeded was 71° 53′ 30″, longitude, 90° 03′ 45″, and the distance from its entrance about 120 miles. It had been observed that, from the moment they entered Lancaster Sound, the motion of the compass-needle was very sluggish, and both this and its deviation increased as they proceeded to the westward, and continued to do so in descending this inlet. Having reached latitude 73°, "they witnessed for the first time the curious phenomenon of the directive power of the needle becoming so weak as to be completely overcome by the attraction of the ship, so that the needle might now be said to point to the north pole of the ship."

It was the 19th of August before they again reached the northern shore of Barrow's Strait, and found the ice still remaining around Leopold's Islands, yet not impassable; but on that and the following day the weather was thick, and much snow had fallen. They now, on the 21st, had the satisfaction of finding nothing to interrupt their progress to the westward. The sea was entirely free from ice, and "so perfectly clear, that it was almost impossible to believe it to be the same part of the sea which, but a day or two before, had been completely covered with floes to the utmost extent of our view." On the evening of the 22d, after passing several bays and headlands on the northern shore, they came before the mouth of a channel of more than eight leagues in width, looking up which, on a beautiful clear evening, neither land nor ice could be seen from the mast head. "To this noble channel," says Parry, "I gave the name of Wellington, after his grace, the master-general of the ordnance."

"The arrival off this grand opening was an event for which we had long been looking with much anxiety and impatience; for the continuity of land to the northward had always been a source of uneasiness to us, principally from the possibility that it might take a turn to the southward, and unite with the coast of America. The appearance of this broad opening, free from ice, and of the land on each side of it, more especially that on the west, leaving scarcely a doubt on our minds of the latter being an island relieved us from all anxiety on that score; and every one felt that we were now finally disentangled from the land which forms the western side of Baffin's Bay; and that, in fact, we had actually entered the Polar Sea. Fully impressed with this idea, I ventured to distinguish the magnificent opening, through which our passage had been effected from Baffin's Bay to Wellington Channel, by the name of Barrow's Strait, after my friend Mr. Barrow, secretary of the Admiralty, both as a private testimony of my esteem for that gentleman and as a public acknowledgment due to him for his zeal and exertions in the promotion of northern discovery."—P. 51, 52.

He then pays the compliment of assigning to the capes, inlets, and groups of islands the names of Hotham, Barlow, and Cornwallis; and goes on to say:

"Though two thirds of the month of August had now elaps-

ed, I had every reason to be satisfied with the progress we had hitherto made. I calculated upon the sea being still navigable for six weeks to come, and probably more, if the state of the ice would permit us to edge away to the southward in our progress westerly: our prospects, indeed, were truly exhilarating; the ships had suffered no injury; we had plenty of provisions; crews in high health and spirits; a sea, if not open, at least navigable; and a zealous and unanimous determination in both officers and men to accomplish, by all possible means, the grand object on which we had the happiness to be employed."—P. 52.

It is delightful to dwell upon such joyful hopes, prospects, and satisfaction as are expressed in the terms of this passage, and in the course of a voyage of so novel, so perilous, and so precarious a nature as this. It is a just and well-deserved compliment paid by a writer in a periodical journal, who says that, "after a most attentive perusal, we can confidently say, that few books since the commencement of our labors have afforded us more to praise or less to censure, and that not one has inspired us with more respect for the character of its author."

The expedition continued to proceed westerly, but made only slow progress on account of the detached floes of ice and foggy weather. To the northward, as far as could be seen, the land was apparently composed of clusters of islands. To the westward the sea, for the most part, was covered with a compact body of ice, yet a channel was open for the ships between it and the shore. On reaching Sir Byam Martin's Island, the nearest to Melville Island, Captain Sabine and Mr. James Ross, accompanied by Messrs. Edwards and Fisher, were dispatched on shore to make the necessary observations, and to examine and collect specimens of the natural productions of the country. These officers reported, on their return, that they landed on a sandy beach near the east point of the island, which they found to be more productive and altogether more interesting than any other part of the shores of the Polar regions that had yet been visited. Remains of Esquimaux habitations were found in four different places; some of them consisted of stones rudely planned in a circular form, and were from seven to ten feet in diam-

eter; traces of reindeer and musk-oxen were seen in many situations; the ravines were covered with luxuriant moss and other vegetation, the character of which differed very little from that at the bottom of Possession Bay. The basis of the island consisted chiefly of sandstone, besides which were some rich granite and red feldspar. The latitude of the place of observation was 75° 09′ 23″, and the longitude 103° 44′ 37″; the dip of the magnetic needle 88° 25′ 58″; and the variation was now found to have changed from 128° 58′ *W.*, in the longitude of 91° 48′ (where the last observations on shore had been made), to 165° 50′ 09″ *E.*, at their present station; "so that we had," says Parry, "in sailing over the space included between those two meridians, crossed immediately to the northward of the Magnetic Pole, and had undoubtedly passed over one of those spots upon the globe where the needle would have been found to vary 180°, or, in other words, where the North Pole would have pointed to the south." In point of fact, though from the weakness and sluggish performance of the needles observations that required great nicety could not be depended on, yet Parry thinks that one of those spots he alludes to would at that time have been somewhere not far from the meridian of 100° W. of Greenwich. The "spot alluded to" was, of course, the Magnetic Pole, discovered eleven years after this by Commander James Ross, and which is only about two or three degrees "from the meridian of 100° W. of Greenwich."

"It would undoubtedly have been extremely interesting to obtain such an observation, and in any other than the very precarious navigation in which we were now engaged, I should have felt it my duty to devote a certain time to this particular purpose; but, under present circumstances, it was impossible for me to regret the cause which alone had prevented it, especially as the importance to science of this observation was not sufficient to compensate the delay which the search after such a spot would necessarily have occasioned, and which could hardly be justified at a moment when we were making, and for two or three days continued to make, a rapid and unobstructed progress toward the accomplishment of our principal object."—P. 62.

It may now be said it was well he did not, as the spot,

since discovered by Commander Ross, was then, as it probably still is, unapproachable by such ships as those of Parry.

On the 1st of September Parry inserts in his narrative a table showing a daily abstract of the monthly meteorological journals, consisting of columns indicating the temperature of the air and the sea, state of the barometer, prevailing winds, and prevailing weather; and in this form a tabular series is repeated on the first of every month. From the one in question, it appears that the mean temperature in August was, in the shade, 33° 67′; on sea water, 31° 93′. It would be desirable that such a form should be kept and made imperative, at all times and in all places, on board every ship of war. The expedition continued its course westerly, among patches of ice and in a foggy atmosphere, giving names to small islands, bays, and headlands as they occurred; and on the 4th of September, Parry observes:

"We had the satisfaction of crossing the meridian of 110° W. from Greenwich, in the latitude of 74° 44′ 20″, by which his majesty's ships under my orders became entitled to the sum of five thousand pounds, being the reward offered by the king's order in Council, grounded on a late act of Parliament, to such of his majesty's subjects as might succeed in penetrating thus far to the westward within the Arctic Circle."—P. 72.

To the bluff head, where the observation was made, the men gave the name of *Bounty Cape*, a very appropriate name, after the gallant commander had announced to them officially that their exertions had so far been crowned with success as to entitle them to this reward.

On the 5th of September, after having worked their way along the southern coast of the largest island of the group they had recently passed, the boats landed, for the second time, in a bay which, for its soundings and shelter, appeared the most safe and convenient that had occurred to anchor in; and, accordingly, the Bay of the *Heela* and *Griper*, so named by Parry, became the first spot where the expedition had dropped anchor since leaving the coast of Norfolk. Considering the advanced period of the year, it occurred to the commander that this place appeared to mark, in a very decided manner,

the completion of one stage of their voyage. "The ensigns and pendants were hoisted, and it created in us no ordinary feelings of pleasure to see the British flag waving, for the first time, in those regions which had hitherto been considered beyond the limits of the habitable world." Parry gave to this large island the name of *Melville*, being that of the First Lord of the Admiralty.

Parry determined, however, to extend their operations for prosecuting discovery in these regions, though it became necessary to secure the ships every night from ten till two o'clock, when it was too dark to keep under way, more especially as no trust whatever could be placed in the compasses. But his hopes were damped when, from the crow's nest, he perceived a compact body of ice extending completely in to the shore, near the point which formed the western extreme of the island; the ship ran, however, sufficiently close to be assured that no passage to the westward could then be effected, the floes being literally upon the beach, and not a drop of clear water visible beyond them. The shore was covered nearly with large masses of ice aground in four or five fathoms of water, of which they would have drawn at least ten if set afloat; these masses the people were in the habit of calling *bergs*, but they were very different to those met with in Baffin's Bay, none of which kind were seen to the westward of Barrow's Strait. The length of the night, when darkness prevailed in seas such as this, was little suited for prosecuting discoveries; yet as September is considered the most valuable month in the year, on account of the sea being then more free from ice than at any other time, Parry states his strong conviction that the ultimate accomplishment of the object must depend, in a great measure, on the farther progress to be made this season, and therefore he determined to extend their operations to the latest possible period.

He soon, however, perceived that the season was at an end. On the 9th of September the floes of ice were observed to be sensibly approaching the shore, and matters grew worse till the 12th, when the ships were actually beset and in a perilous situation. There was no

possibility of moving them; a party, therefore, was sent on shore to collect coal, which had been discovered not far off.

Another party, consisting of Mr. Fife, Greenland mate, and six men of the Griper, having been sent on shore, a heavy snow-storm came on, in which they lost their way; not appearing when night approached, other parties were sent out in search of them—no less than four; and it was not till three cold days and more severe nights had passed away that they all got on board, most of them exhausted by cold and fatigue, and severely frost-bitten in their toes and fingers. A tempestuous night of six or seven hours of darkness, accompanied with stormy weather, without any shelter on the shore, made it expedient for them to endeavor to retrace their steps to the eastward. Other parties were sent out, and several days were passed in great anxiety before the whole of them returned.

About this time, the 14th of September, the change in the temperature was a very striking one, the mercury having descended as low as to 9°; and from this day the commencement of winter might fairly be dated. The 18th was a day of severe trial for the ships. Endeavoring to return along the land, the bay ice had become so thickened that, with the pressure of the floes without, the ships were arrested in their progress, and unable to move a single foot ahead, and there was but too much reason to apprehend that they would be driven on shore, or forced by the floes against the heavy ice on the beach. From this time till the 20th of the month the perilous situation of the ships is minutely described, when on that day a large floe forced the Griper on shore, where she lay aground on the beach. At this time Lieutenant Liddon, who had recently recovered from a rheumatic complaint, caused by the harassing circumstances of the last fortnight and the increased cold, which reduced the mercury down to 15°, was brought to a very debilitated state. Parry, therefore, proposed to him to allow himself to be removed to the Hecla till the Griper was again afloat. To this proposal he would by no means listen, saying he should be the last man, instead of the first, to leave the Griper; and resolute in his

purpose, like a true British sailor, he remained seated against the lee-side of the deck, giving the necessary orders.

The time was now more than arrived when the ships, if possible, should be got into winter quarters. A harbor being pitched upon, and, on the 24th, the Griper having got afloat and joined, the two ships were secured in the proper position for commencing operations. A sailor is never at a loss for contriving and executing the means of overcoming such difficulties as few landsmen would venture to encounter. On the present occasion they cut a canal through the solid ice of the average thickness of seven inches, and completed it in three days, the whole length of which is stated to have been four thousand and eighty-two yards, or two miles and one third nearly. In the afternoon of the 26th the ships were hauled into their winter quarters, with three loud and hearty cheers from both ships' companies.

"Having now reached the station where, in all probability, we were destined to remain for at least eight or nine months, during three of which we were not to see the face of the sun, my attention was immediately and imperiously called to various and important duties, many of them of a singular nature, such as had for the first time devolved on any officer in his majesty's navy, and might, indeed, be considered of rare occurrence in the whole history of navigation. The security of the ships and the preservation of the various stores were objects of immediate concern. A regular system to be adopted for the maintenance of good order and cleanliness, as most conducive to the health of the crews, during the long, dark, and dreary winter, equally demanded my attention."—P. 101.

The housing over the ships was one of the first considerations, being calculated to contribute to the comfort of the officers and men, as well as to the preservation of that extraordinary degree of health which had hitherto been enjoyed in both ships. Warmth and dryness of the berths and bed-places were the next important matters to be secured, the thermometer having now fallen below zero. An iron box, or air-vessel, with three tubes of two inches diameter communicating from below with the external air, and uniting above with a metal box, was so contrived as to convey the heated air to

the men's berths; and this apparatus, Parry says, with a moderate fire, produced a current of air of the temperature of 87° at the distance of seventeen feet from the fire-place. The quantity and quality of provisions were to be regulated, having regard to the preservation of health. An anti-scorbutic beer had been issued in lieu of a proportion of spirits; but when the weather became extremely severe, the beer would not ferment so as to make it palatable. Every attention was paid to the issuing of fuel, to the article of proper clothing, and to the nature of the provisions and little luxuries to be distributed. In short, the able and careful manner in which every article of ships' stores appears to have been dealt out to the men, and while judicious in quality, abundant in quantity, and, at the same time, economically administered, gave satisfaction to all. Both men and officers were fully aware of the necessity there was to secure a supply for the winter, and for the following season. But Parry, with right feeling and judgment, and, it may be added, with a knowledge of human nature, in order to obviate any approach to murmuring or despondency, adopted a measure admirably calculated for preventing them.

"Under circumstances of leisure and inactivity, such as we were now placed in, and with every prospect of its continuance for a very large portion of the year, I was desirous of finding some amusement for the men during this long and tedious interval. I proposed, therefore, to the officers to get up a play occasionally on board the Hecla, as the readiest means of preserving among our crews that cheerfulness and good humor which had hitherto subsisted. In this proposal I was readily seconded by the officers of both ships; and Lieutenant Beechey having been duly elected as stage-manager, our first performance was fixed for the 5th of November, to the great delight of the ships' companies. In these amusements I gladly took a part myself, considering that an example of cheerfulness, by giving a direct countenance to every thing that could contribute to it, was not the least essential part of my duty, under the peculiar circumstances in which we were placed.

"In order still farther to promote good humor among ourselves, as well as to furnish amusing occupation, during the hours of constant darkness, we set on foot a weekly newspaper, which was to be called the *North Georgia Gazette and*

Winter Chronicle, and of which Captain Sabine undertook to be the editor, under the promise that it was to be supported by original contributions from the officers of the two ships: and though some objection may, perhaps, be raised against a paper of this kind being generally resorted to in ships of war, I was too well acquainted with the discretion, as well as the excellent disposition of my officers, to apprehend any unpleasant consequences from a measure of this kind; instead of which I can safely say that the weekly contributions had the happy effect of employing the leisure hours of those who furnished them, and of diverting the mind from the gloomy prospect which would sometimes obtrude itself on the stoutest heart."—P. 106, 107.

Nothing more was wanting than such devices as these, resorted to in a moment of peculiar and extraordinary difficulty, to establish the character of Parry for ready and happy expedients, accompanied by a sound judgment, which thus kept alive the active powers of the mind, and prevented it from falling into a habit of inactivity and listlessness, and from sinking into that worst of all conditions, a state of morbid torpor. His plan was, as it could not well be otherwise, completely successful.

Besides his editorship, Captain Sabine had abundance of employment of a very difficult and more important kind, the results of which are given in detail in the Appendix, under the head of *Magnetic Observations*, Experiments on the *Pendulum*, and in the description of objects of Natural History. His first attention, on the arrival of the ships in their winter quarters, was the selection of a proper place for the observatory, which was erected on a convenient spot for communication with the ships, and also with a house built on the beach for the reception of the clocks and other instruments. The walls of this were of double plank, with moss between, so that a high temperature could be kept up in it without difficulty by a single stove.

Hunting parties occasionally went out and procured a few reindeer; but a migration of these animals took place before the close of October, leaving behind them only wolves and foxes to keep the party company during the long winter months. Even the Polar hare, so common in the Arctic regions, never once showed itself on Melville Island in the course of the winter. The

musk ox (*Bos moschatus*), also very common, during its proper season, arrived on Melville Island in the middle of May, by crossing the ice from the southward, and quitted it by the same way on its return toward the end of September. On the 15th the last covey of ptarmigan was met with; and on the same day were seen fifteen deer, all lying down, except one large one, probably a stag; this, after the rising of the rest, seemed to guard the animals in their flight, frequently going round the herd, sometimes striking them with his horns to make them go on, which they appeared not much inclined to do. Even seals were not found in this neighborhood; but whales of different kinds were commonly met with: gulls and ducks, however, so numerous in Davis's Strait and the Georgian Islands, condescended not to visit Melville Island, but "two or three specimens of a caterpillar were obtained, one of which was brought to England"—of course as an Arctic curiosity. One large white bear, having pursued Captain Sabine's servant to the ship, was shot at and wounded, but made his escape; it was the only one met with during the stay of the party, but described as being more purely white than any they had before seen. A feeble willow, a saxifrage, lichens, and stunted grasses constitute pretty nearly the *flora* of Melville Island.

This desolate and miserable island was destined to be the abode of our countrymen for nine to ten dreary winter months, during three of which, as they had been able to anticipate, the sun did not shed on them so much as one benign ray. No wonder, then, that not a single human being was found to inhabit so repulsive a spot; and it required no little consideration, on the part of the commander of the expedition, to find employment for the people under his command and protection, to preserve their health, and to ward off despondency for so long a period. The method hit upon by Lieutenant Parry had produced, to a great degree, an admirable effect. Yet something more was still required than the acting of plays and the writing and reading of gazettes. Both mind and body demanded exercise, as the only means of protection against disease, which a large share of leisure and a continued state of mental inactivity were but

too sure to produce. The total privation of game of any kind afforded few excursions for the source of exercise and amusement which hunting is known to confer. Parties, however, had occasionally been sent out shortly after the taking up of their winter quarters. One of these did not return on board before sunset, as strictly ordered, and the consequence is stated to have been as follows:

"John Pearson, a marine belonging to the Griper, who was the last that returned on board, had his hands severely frost-bitten, having imprudently gone away without mittens, and with a musket in his hand. A party of our people most providentially found him, although the night was very dark, just as he had fallen down a bank of snow, and was beginning to feel that degree of torpor and drowsiness which, if indulged, inevitably proves fatal. When he was brought on board his fingers were quite stiff, and bent into the shape of that part of the musket which he had been carrying; and the frost had so far destroyed the animation in his fingers on one hand that it was necessary to amputate three of them a short time after, notwithstanding all the care and attention paid to him by the medical gentlemen. The effect which exposure to severe frost has in benumbing the mental as well as the corporeal faculties was very striking in this man, as well as in two of the young gentlemen, who returned after dark, and of whom we were anxious to make inquiries respecting Pearson. When I sent for them into my cabin they looked wild, spoke thick and indistinctly, and it was impossible to draw from them a rational answer to any of our questions. After being on board for a short time the mental faculties appeared gradually to return with the returning circulation; and it was not till then that a looker-on could easily persuade himself that they had not been drinking too freely."—P. 108.

This was fully sufficient for the attentive and kind-hearted commander to adopt effective measures against a recurrence of so painful a result. So early as the 29th of October the thermometer was down to 24° below zero. It was now distressing to touch any metallic substance with the naked hand in the open air; it produced a feeling of intense heat, and took off the skin. If the eyepiece of a telescope touched the face, it occasioned an intense burning pain; the remedy was to cover them and other instruments with soft leather. The officers, notwithstanding, indulged themselves in walking for an hour or two in the middle of the day, in the depth of winter,

even when the thermometer was down to 40° or even 50° below zero, without experiencing much inconvenience from this intense degree of cold, provided always that there was no wind; but the least breeze made the exposure to it intolerable when the mercury was even several degrees above zero. The following passage is so naturally and so well expressed, that the desire to extract it is irresistible. Speaking of their short walks on shore, Parry says:

"It may well be imagined that at this period there was but little to be met with in our walks on shore which could either amuse or interest us. The necessity of not exceeding the limited distance of one or two miles, lest a snow-drift, which often rises very suddenly, should prevent our return, added considerably to the dull and tedious monotony which day after day presented itself. To the southward was the sea, covered with one unbroken surface of ice, uniform in its dazzling whiteness, except that, in some parts, a few hommocs were seen thrown up somewhat above the general level. Nor did the land offer much greater variety, being almost entirely covered with snow, except here and there a brown patch of bare ground, in some exposed situations, where the wind had not allowed the snow to remain. When viewed from the summit of the neighboring hills, on one of those calm and clear days which not unfrequently occurred during the winter, the scene was such as to induce contemplations which had, perhaps, more of melancholy than of any other feeling. Not an object was to be seen on which the eye could long rest with pleasure, unless when directed to the spot where the ships lay, and where our little colony was planted. The smoke which there issued from the several fires, affording a certain indication of the presence of man, gave a partial cheerfulness to this part of the prospect; and the sound of voices, which, during the cold weather, could be heard at a much greater distance than usual, served now and then to break the silence which reigned around us—a silence far different from that peaceable composure which characterizes the landscape of a cultivated country; it was the deathlike stillness of the most dreary desolation, and the total absence of animated existence. Such, indeed, was the want of objects to afford relief to the eye or amusement to the mind, that a stone of more than usual size appearing above the snow, in the direction to which we were going, immediately became a mark, on which our eyes were unconsciously fixed, and toward which we mechanically advanced.

"Dreary as such a scene must necessarily be, it could not, however, be said to be wholly wanting in interest, especially when associated in the mind with the peculiarity of our situation, the object which had brought us hither, and the hopes which the least sanguine among us sometimes entertained of spending a part of our next winter in the more genial climate of the South-Sea Islands. Perhaps too, though none of us then ventured to confess it, our thoughts would sometimes involuntarily wander homeward, and institute a comparison between the rugged face of nature in this desolate region and the livelier aspect of the happy land which we had left behind us."—P. 124, 125.

Nothing could be more judicious than the arrangements made for the employment of the men each day in the week; and on Sundays divine service was invariably performed, and a sermon read, on board both ships. "The attention," says Parry, "paid by the men to the observance of their religious duties was such as to reflect upon them the highest credit, and it tended in no small degree to the preservation of that regularity and good conduct for which, with very few exceptions, they were invariably distinguished." The minor arrangements made by Parry to find employment, and to vary the occupations of both men and officers, during the long, unbroken night of three months, appear to have been very judicious. The former, after attending divisions morning and evening, cleared up the decks, attended the officers round the ships, examined their berths and bed-places, and in the evening went to their supper, while the officers took their tea. After this the men were permitted to amuse themselves as they pleased, and games of various kinds, as well as dancing and singing, occasionally went on upon the lower deck till nine o'clock, when they retired to rest, and their lights were extinguished. "It is scarcely necessary to add," Parry observes, "that the evening occupations of the officers were of a more rational kind than those which engaged the attention of the men. Of the former, reading and writing were the principal employments, to which were occasionally added a game of chess, or a tune on the flute or violin, till half past ten, about which time we all retired to rest."

On Christmas-day, which had now arrived, the weath-

er was raw and cold, with snow; but to mark the day in the best manner that circumstances would permit, divine service was performed on board the two ships; "and I directed a small increase in the men's usual proportion of fresh meat, as a Christmas dinner, as well as an additional allowance of grog, to drink the health of their friends in England. The officers also met at a social and friendly dinner, and the day passed with much of the same kind of festivity by which it is usually distinguished at home; and," he adds, "to the credit of the men be it spoken, without any of that disorder by which it is too often observed by seamen."

The good order, regularity, and discipline of the two ships, in this most trying of situations, is above all praise; wholly deprived as they were of the sight of the sun for eighty-four days, which may be reckoned, as it really was, one continued night, lighted up only, and that partially, by the moon, and occasionally by the fleeting Aurora Borealis. Their extraordinary good conduct, under such circumstances, must, in a great degree, be ascribed to the example set them by their excellent commander, cordially seconded by Lieutenant Liddon and the other officers. It is well understood in the navy that obedient and good conduct on the part of seamen, and a high state of discipline in a man-of-war, are the sure results of able and intelligent officers, kind and attentive to those under their command, yet, at the same time, strictly requiring from them a ready and willing obedience to the orders of their superiors, and to the rules and regulations of the service. Such were the men, and such the commanders, on the present service; and the consequence was, that every man (with the exception of one poor fellow, who carried out with him an incurable disease) was brought home in as high a state of health as that in which he left England.

One case of scurvy was reported on the 2d of January. Mr. Scallon, gunner of the Hecla, complained of pains in his legs, and the appearance of his gums left no doubt of the symptoms being scorbutic, which Mr. Edwards, the surgeon, ascribed to the deposit of moisture in his bed-place. The commander, ever anxious for the preservation of health in his ship, put in requisition all

their anti-scorbutics for his recovery, consisting of preserved vegetable soups, lemon-juice and sugar, pickles, preserved currants and gooseberries, and spruce beer. He also raised in his cabin a quantity of mustard and cress, of which, even in the severity of the winter, he could generally ensure a crop at the end of the sixth or seventh day. So effectual were these remedies in Scallon's case, that, on the ninth evening from the attack, he was able to walk about on the lower deck, and "he assured me," says Parry, "that he could then run a race."

Thursday, the 3d of February, was a day not to be forgotten. At twenty minutes before apparent noon the sun was seen from the Hecla's main-top (at the height of fifty-one feet above the sea), being the first time that this luminary had been visible to them since the 11th of November—a period, as already said, of eighty-four days, that is, twelve days less than the time of its remaining actually beneath the horizon, independently of the effects of atmospherical refraction. Throughout February, however, the intensity of the cold, instead of being somewhat mitigated by the rays of the sun, feeble as they were, was increased. On the 24th a fire broke out in the shore-house, and, in the exertions to save the valuable instruments, not fewer than sixteen men incurred frost-bites, the thermometer during the day being from —43° to —44°.

"Among these there were four or five cases which kept the patients confined for several weeks; but John Smith, of the artillery, who was Captain Sabine's servant, and who, together with Sergeant Martin, happened to be in the house at the time the fire broke out, were unfortunate enough to suffer much more severely. In their anxiety to save the dipping-needle, which was standing close to the stove, and of which they knew the value, they immediately ran out with it; and Smith, not having time to put on his gloves, had his fingers in half an hour so benumbed, and the animation so completely suspended, that, on his being taken on board by Mr. Edwards, and having his hands plunged into a basin of cold water, the surface of the water was immediately frozen by the intense cold thus suddenly communicated to it; and, notwithstanding the most humane and unremitting attention paid to him by the medical gentlemen, it was found necessa-

ry, some time after, to resort to the amputation of a part of four fingers on one hand and three on the other."—P. 148, 149.

"The appearance," says Parry, "which our faces presented at the fire was a curious one, almost every nose and cheek having become quite white with frost-bites in five minutes after being exposed to the weather, so that it was deemed necessary for the medical gentlemen, together with some others appointed to assist them, to go constantly round while the men were working at the fire, and to rub with snow the parts affected, in order to restore animation."

On the 16th day of February the greatest degree of cold was experienced, the thermometer having descended to —55°, and remained for fifteen hours at —54°, the less to have been expected as the old year had closed with mild weather. On the following day Parry says, "Notwithstanding the low temperature of the external atmosphere, the officers contrived to act, as usual, the play announced for this evening; but it must be confessed that it was almost too cold for either the actors or the audience to enjoy it, especially those of the former who undertook to appear in female dresses." It is some consolation, however, to be told that there was no wind, and the severest cold has been stated to be tolerable in a calm. In March the snow began to melt, with a temperature of 20° to 30° in the sun, but with —22° to —25° in the shade. Luminous arches, parhelia, and the Aurora were frequent, but not particularly remarkable. Toward the end of April the thermometer continued above the freezing point in the shade for the greater part of two days, and about the middle of May the ships were once again afloat, the operation of cutting the ice round them being completed.

Parry, however, observes that it was sufficiently discouraging to his hopes of a farther progress to the westward, to perceive that, on the last day of May, "the sea still presented the same unbroken and continuous surface of solid and impenetrable ice, and ice that could not be less than from six to seven feet in thickness, as we knew it to be about the ships. When to this circumstance was added the consideration that scarcely

the slightest symptoms of thawing had yet appeared, and that in three weeks from this period the sun would again begin to decline to the southward, it must be confessed that the most sanguine and enthusiastic among us had some reason to be staggered in the expectation they had formed of the complete accomplishment of our enterprise."

It may here be remarked that the whole of the navigation hitherto performed had been from the 1st of August, when Lancaster Sound was entered, to the 26th of September, when the ships were anchored on the coast of Melville Island. Lieutenant Parry has elsewhere observed that the month of September is one of the most favorable for navigation among masses of ice. but the shores of Melville Island, at least, appear to be an exception—to be, in fact, the recipients of the great est part of the ice driven to the eastward by the westerly winds about that parallel, this island being the outermost of the Georgian chain, and considered by Parry as by far the worst he ever met with.

Previous, however, to their departure from this dreary, dismal, and detestable abode, Parry determined to make a journey across Melville Island to the northward, and to return by a different route. He was accompanied by Captain Sabine, Messrs. Fisher, Nias, and Reid, a sergeant of marines, and a sergeant of artillery, together with three seamen and two marines, making, in the whole, a party of twelve. They took with them tents, provisions, and a cooking apparatus. It was found that those parts of the island which were clear of snow produced the dwarf willow, sorrel, and poppy, and that the moss was very luxuriant. On the second day they saw a pair of ducks (*Anas spectabilis*), and killed seven ptarmigan: sorrel and saxifrage were abundant. They found pieces of coal embedded in sandstone; passed a very extensive, dreary, and uninteresting level plain covered with snow; and this kind of ground, with occasional ravines and foggy weather, continued for three days, during which they saw not a living animal, except one or two flocks of geese (*Anas bernicla*).

Parry, being desirous of obtaining a view of the sea on the northern shore, took with him the two midship-

men Nias and Reid, with a quarter-master of the Griper. After a long and disagreeable march they came to what they considered to be the sea. Anxious, however, to leave nothing uncertain, they walked a few hundred yards upon the ice, and endeavored, by means of a boarding-pike and their knives, to make a hole through it in order to taste the water; but after two hours' labor they only succeeded in getting through two feet of very hard, brittle, and transparent ice, more so than that of salt water usually is. This did not satisfy Parry, who returned to the party left behind and carried them back with him to the spot. The floe was penetrated, and proved to be fourteen feet and four inches in thickness; the water flowed up within fifteen inches of the surface of the ice, and was found to be "not very salt;" sufficiently so, however, to convince them all that it was the sea on which they were standing.

On the 9th of June they set out on their return, killed three ptarmigans, and saw a pair of ducks, and, two days after, a great number of brent geese, some ptarmigan, and many snow-buntings; the constant and cheerful note of the latter reminded them of a better country —a worse, perhaps, it would be difficult to find; it reminded them of home, this darling little bird being considered the robin redbreast of the snowy regions.* Arrived at Bushnan's Cove, in Liddon's Gulf, on the western side of Melville Island, the party found "one of the pleasantest and most habitable spots we had yet seen in the Arctic regions, the vegetation being more abundant and forward than in any other place, and the situation sheltered and favorable for game." They found here a good deal of moss, grass, dwarf-willow, and saxifrage, and Captain Sabine met with a ranunculus in full flower. Thus we see that even in this, the most desolate region of the earth, the superiority of the western coast predominates. The hunters saw and fired at a musk-ox, but did not kill him; they saw also several golden plovers, and one or two boatswains (*Lestris*). On the 15th they reached the ships, and were complimented by their shipmates on their good looks, and as appearing in more robust health than when they departed.

* See Captain Lyon's Voyage regarding this bird.

Toward the end of June the ice began to move in the offing, with a loud, grinding noise, and on the 5th of July the thermometer rose from 50° to 52°, and on the two following days to 55°. The ice in the harbor also began to dissolve, and was there covered with pools of water. On the 17th the temperature rose to 60°, the highest point it ever reached at Melville Island. On the 24th every thing was complete for proceeding to sea; "the sails were bent in readiness for starting at a moment's notice, though it must be confessed that the motive for doing so was to make some show of moving, rather than any expectation I dared to entertain of soon escaping from our long and tedious confinement; for it was impossible to conceal from the men the painful fact, that in eight or nine weeks from this period the navigable season must unavoidably come to a conclusion." Another painful fact was, that, before the expiration of July, the approach of winter announced itself in the diminution of temperature, which seldom reached 40° by day, and also by the falls of sleet and snow, as well as by the pools of water frozen over in the night.

On the last day of July the whole body of the ice in the harbor was perceived to be slowly moving out, breaking away for the first time at the points which form the entrance of the harbor.

The latitude and longitude of Winter Harbor is thus stated:

Latitude by 39 meridian altitudes .	74° 47′ 19″ *N.*
Longitude by 692 sets of observations, consisting of 6862 lunar distances .	110° 48′ 29″ *W.*
Dip of magnetic needle . . .	88° 43′
Variation	127° 47′ 50″ *E.*

On the 1st of August, the day on which Lancaster Sound had been entered, the two ships stood out of Winter Harbor, after having passed ten whole months and a part of September and August in that dreary place of imprisonment. They stood along the shore of Melville Island to the westward, occasionally running in near to the beach to avoid the masses of ice in motion; in one place, the Hecla being within twenty yards of the beach, a point of land, which was lined all round with large hommocs of ice, rendered it a most dangerous sit-

cation; and the more so as the body of the ice coming in from the westward, being distant from the ship less than half a mile, was composed of floes infinitely more heavy than any they had elsewhere met with during the voyage. Lieutenant Liddon sent word that the Griper was also in a situation exactly similar to that of the Hecla, where "nipping" appeared unavoidable if the floes should come in. Parry desired Liddon not to join him, as there was not room for two ships, "and the chances of saving one of them from the catastrophe we had reason to apprehend were greater by their being separate."

By chance, and it was by chance entirely, they escaped; but had the apparent catastrophe taken place, which they had reason to apprehend, not a single being could have survived the melancholy fate that must inevitably have awaited them; all must have perished from famine and the intense cold of the approaching winter. This state of things, and, indeed, every circumstance connected with this abominable island, must serve as a beacon to warn off any future navigator from coming even within sight of it, but to avoid it as the ancients did Scylla or Charybdis. It is to be hoped, and there is reason to believe, that Sir John Franklin's attention has been particularly drawn to this part of Sir Edward Parry's narrative.

The ships remained, however, at or near the same place, and a mass of about an acre in extent drove in and gave the Hecla a considerable "nip," and then grazed past her to the westward. The following day another floe came in, "and gave the ship a heavy rub." Parry, however, still persevered in creeping along the shore of Melville Island, the ships sustaining such frequent and "severe rubs" that nothing short of the stoutest timber, the most sound and flexible iron, and the most judicious construction of the fabrics, could possibly have withstood these frequent rubs to which they were exposed. Persevering, however, in this beach-sailing, generally within half a mile of it, till they arrived very nearly to the westernmost point of the island, the commander, believing there was little hope of making farther progress to the westward, and having experienced during the first half of the navigable season such a continued series of vexations,

disappointments, and delays, accompanied by such a constant state of danger to the ships, felt it now to be no longer justifiable to persevere in a fruitless attempt to get to the westward.

On consulting the officers of both ships, they agreed with him that any farther attempt to proceed to the westward in that parallel would be altogether fruitless; they also agreed in the plan he proposed of running back to the eastward along the edge of the ice, to look out for any opening that might lead them to the American continent, and, failing to find any such, to return to England. On the 26th of August, therefore, they turned the ships' heads to the eastward, and on the morning of the 27th had passed the eastern end of Melville Island, in an open channel not less than ten miles wide, all hands heartily rejoicing to take leave forever of this island. We are told, however, in a note, that the island, during their stay of nearly twelve months, had afforded them the following quantity of game: three musk-oxen, twenty-four deer, sixty-eight hares, fifty-three geese, fifty-nine ducks, and one hundred and forty-four ptarmigans, amounting in weight to three thousand seven hundred and sixty-six pounds of meat; that is to say, it afforded to each of ninety-four men three pounds and a half of meat per month! the produce of an island which is stated to exceed five thousand square miles.

On the 31st of August they repassed Lancaster Sound, and on the 1st of September bore up and ran along the land, taking their departure from the flag-staff in Possession Bay, on the southeastern point of the said sound. As the whole of this coast was run down in 1818, and partially examined, it is not necessary to follow the present expedition in any remarks upon it; but before the ground be quitted on which no less than twelve months were passed, from September, 1819, to August, 1820, the temperature of the air in the shade may be noticed:

Maximum 60°, Minimum 50°, Range 110°.

The mean of the twelve months +1°·33.

The lowest temperature registered on the ice was —55°; it did not rise above 54° for seventeen hours on the 14th and 15th of February, 1820.

On the whole of this eastern coast of Baffin's and Da-

vis's Strait they called only at one place, Clyde's River, in latitude 70° 22′. Here they received visits from a tribe of Esquimaux, whose appearance and conduct pleased them all very much—lively, good natured, and cheerful, with a great inclination to jump about when much pleased, "rendering it," says Parry, "a penalty of no trifling nature for them to sit still for half an hour together." They were decently clothed, male and female, and their children equally so, in well-dressed and neatly-sewn seal skins. They were, in fact, in all respects, infinitely superior to Ross's Arctic Highlanders, who pulled or rubbed noses as a salutation, and asked if ships were not living creatures. But Parry shall himself mark the contrast:

"Upon the whole, these people may be considered in possession of every necessary of life, as well as of most of the comforts and conveniences which can be enjoyed in so rude a state of society. In the situation and circumstances in which the Esquimaux of N. Greenland [Ross's Highlanders] are placed, there is much to excite compassion for the low state to which human nature appears to be there reduced—a state in few respects superior to that of the bear or the seal, which they kill for their subsistence. But with these it was impossible not to experience a feeling of a more pleasing kind: there was a respectful decency in their general behavior, which at once struck us as very different from that of the other untutored Esquimaux; and in their persons there was less of that intolerable filth by which these people are so generally distinguished. But the superiority for which they are most remarkable is, the perfect honesty which characterized all their dealings with us. During the two hours that the men were on board, and for four or five hours that we were subsequently among them on shore, on both which occasions the temptation to steal from us was, perhaps, stronger than we can well imagine, and the opportunity of doing so by no means wanting, not a single instance occurred, to my knowledge, of their pilfering the most trifling article. It is pleasing to record a fact no less singular in itself than honorable to these simple people."—P. 237.

Nothing material occurred in their way across the Atlantic, till the afternoon of the 26th of October, when they struck soundings in seventy fathoms in latitude 59° 55′. On the 28th they were between Fair Island and the Orkneys; on the 29th made Buchaness, and on the

following day the commander landed at Peterhead, accompanied by Captain Sabine and Mr. Hooper, who proceeded without delay to London, where they arrived on the morning of the 3d of November, 1820.

"Such was the excellent state of health which we at this time continued to enjoy on board the Hecla, that during the whole season of our late navigation from Winter Harbor to the coast of Scotland, being a period of thirteen weeks, not a single case had been entered on our sick-list, except from one or two accidents of a trifling nature; and I had the happiness of seeing every officer and man on board both ships (with only one exception out of ninety-four persons) return to their native country in as robust health as when they left it, after an absence of nearly eighteen months, during which time we had been living entirely on our own resources."—P. 309.

It is not intended here to enter into any detail of the observations made during the voyage, nor of the scientific operations carried on whenever an opportunity occurred. Nothing was omitted which highly intelligent officers and the best instruments could supply. An appendix, drawn up on a clear and well-arranged principle, contains such observations and remarks as were deemed of most importance. The volume itself exhibits the conduct and the character of both officers and men in the most praiseworthy point of view; and with regard to the enlightened commander by whom it was written, it need only be repeated here, what has been said elsewhere: "No one can rise from the perusal of this work without being impressed with the fullest conviction that his merits as an officer and scientific navigator are of the highest order; that his talents are not confined to his professional duties; but that the resources of his mind are equal to the most arduous situations, and fertile in expedients under every circumstance, however difficult, dangerous, or unexpected." In addition to all this, Parry may be said to possess the true character and spirit of a British sailor—open, straightforward, and upright; his education was such as to inspire him with a love of the profession, having entered the service in 1803, been made a lieutenant in 1810, and continued to serve in that rank on the coast of America till 1817, when he was selected, as has been related in the preceding voyage, to command the Alexander, as second to Ross.

On the present voyage he was most cheerfully and energetically obeyed and assisted by all his officers in both ships; and, in addition to the ordinary services which navigation and nautical astronomy require, he had the benefit of Captain Sabine's valuable and cordial co-operation in carrying out a series of experiments in a branch of science unconnected with any that regards navigation—the swinging a pendulum for ascertaining the ellipticity of the earth. Captain Sabine, being a connection of Mr. Henry Browne, of Portland Place, had unrestricted access to that gentleman's observatory and valuable collection of astronomical instruments, some of which were supplied to the present expedition; and the practical use of them was well known to Captain Sabine. In the appendix to Commander Parry's narrative we find the captain joined with other officers in making observations on the dip, the variation and declination of the magnetic needle; in ascertaining the latitudes and longitudes by thermometers jointly with Parry, Beechey, and Hooper; and lunar observations taken at Winter Harbor and at sea with Parry, Beecher, Hooper, and Ross, amounting to the extraordinary number of six thousand eight hundred and sixty-two.

Sabine, in addition to all these, describes (in the appendix) the subjects of natural history collected in the three classes of mammalia, birds, and fishes. But the most important will probably be considered that of No. 8, "An account of the experiments to determine the acceleration of the pendulum in different latitudes," which would appear to have been the joint labor of Parry and Sabine. "The accidental discovery," it is said, "that a pendulum, on being removed from Paris to the neighborhood of the equator, increased its time of vibration, gave the first step to our present knowledge that the polar axis of the globe is less than the equatorial, and that the force of gravity at the surface of the earth increases progressively from the equator toward the poles." In the present instance two clocks were used in these experiments, being the property of the Royal Society, and the same which accompanied Captain Cook round the world; and the result is stated to be, that the mean daily acceleration of the two clocks

was seventy-four thousand seven hundred and thirty-four vibrations, which is considered as the true acceleration of a pendulum between the latitudes 51° 31′ 08″ (London) and 74° 47′ 14″ (Melville Island); and the deduction, which was obtained from the result of the acceleration between London and Melville Island, gives the diminution of gravity from the pole to the equator to be ·0055258; and this decimal gives for the ellipticity of the earth, $\frac{1}{312\cdot6}$.

But as Captain Sabine in the year 1821 (the next following that of his arrival in England) embarked on a most arduous undertaking to investigate the last-mentioned subject in high latitudes, an account of his voyages and operations will be resumed hereafter.

It may perhaps be deemed presumptuous in a landsman venturing to differ from so expert and complete a seaman as Commander Parry; but it is under a conviction that he will not be displeased at, but take in good part, a few desultory remarks, though not exactly correspondent with his own opinion. "Our experience," he says, "I think has clearly shown that the navigation of the Polar seas can never be performed with any degree of certainty, without a continuity of land. It was only by watching the occasional openings between the ice and the shore that our late progress to the westward was effected; and had the land continued in the desired direction, there can be no question that we should have continued to advance, however slowly, toward the completion of our enterprise." The objection about to be offered is not to the "slow advance," but to the chance of no advance at all, and to the extreme hazard of the loss of the ship and crew, which had nearly happened in the present instance, and did actually happen to the ship on a future occasion, by a nip, or rub, or pressure between the ice and the shore; to say nothing of the constant apprehension, the anxiety, and incessant threatening of momentary destruction, which occurred along the whole coast of Melville Island, and the frequent "rubs" and "nips" which both ships experienced between the sea ice and the shore ice, when nothing but extreme watchfulness and good management could possibly have saved them from being crushed. Instead,

therefore, of having to "watch the occasional openings between the ice and the shore," would it not be more desirable to avoid placing the ship between the ice and the shore? to keep as far as possible from the shore, and trust to an open sea, free from land of any kind, even with the usual quantity of loose ice, hommocs, or floes? A ship, it is presumed, may always make her way through such a sea with little or no danger, as is well known to the whale-fishing ships, which carefully avoid coming near an ice-bound coast.

Against wintering in the ice there are numerous objections, though the detention can not always be avoided. One of them, but perhaps the least serious, is the great inconvenience and discomfort which the officers and crew must unavoidably be subject to, without any chance of compensation by carrying out the objects of the expedition—without hope of thereby advancing discovery or geographical knowledge. And although the hardships of wintering in the ice have been shown, on the present occasion, to admit of mitigation, when they happen under so able and discreet an officer as Commander Parry, whose resources are inexhaustible, it may fall to the lot of another, whose mind is less fertile in expedients to soften them. Another objection may, perhaps, be raised against the danger that is likely to be incurred; but this by caution and attention may generally be provided against. A third, and one of the first importance in most cases, is the utter inutility of wintering in the Arctic seas; for no harbors are known that are not filled with ice for eight or nine months in the year, and the ship must be secured in ice that is already thick and firm by the close of the season, generally making it necessary to cut a canal, at an immense labor, so as to be floated to a place of safety; and it is most likely to happen that, before she can be got out again, the following season is so far expired, that all the service she can then undertake is to get home, with the loss of a year.

After all, it is but a choice of evils, to winter or return when the first obstruction commences. In that portion of the globe in question, a short passage home is next to certain, whether beset in the ice or in an open sea, as the

wind is generally favorable for a southern voyage, and the current almost always so; but it may happen that *no choice* is left, and then to winter has become a matter of necessity; and Parry has laid down an admirable code of instructions for any one reduced to that emergency.

CHAPTER V.

COMMANDER CLAVERING AND CAPTAIN SABINE, R.A.

1822–1823.

1. *Journal of a Voyage to Spitzbergen and the East Coast of Greenland, in His Majesty's Ship Griper,* D. C. Clavering, Esq., Commander.
2. *An Account of Experiments to determine the Figure of the Earth by means of the Pendulum vibrating seconds in different latitudes; as well as on some other subjects of Philosophical Inquiry.* By Edward Sabine, Captain in the Royal Artillery.

It was considered expedient to introduce a brief notice of this voyage among those specially sent into the Arctic regions for the purpose of discovery, and for two reasons: first, that Commander Clavering was to be ordered to proceed to Spitzbergen, and thence to the east coast of Greenland, and that on the latter he succeeded in reaching a higher degree of latitude than any former or subsequent navigator had effected; and, secondly, that he carried out, first in the Pheasant, and then in the Griper, Captain (now Lieutenant-colonel) Sabine, who, very shortly after his return from the first voyage of Parry to the Arctic Sea, recommenced that series of observations on the length of the seconds' pendulum which were made in the Hecla.

Captain Sabine, impelled by the zeal and love of science for which he is distinguished, hastened to proceed, in the first instance, to Sierra Leone, in the Iphigenia, on the 22d of February, 1822, and completed his pendulum experiments there in April. Sir Robert Mends there assigned the Pheasant to convey him to

the several Atlantic stations where he was desirous to swing his pendulum, mostly in the West Indies and to the southward of the line, as far as Ascension.

Commander Clavering, of the Pheasant, was an officer well versed in the scientific duties of a navigator, and a friendship was speedily formed between the two officers that ceased only with the death of the sailor, which happened when, in the year 1827, he commanded the Redwing, which ship sailed from the coast of Africa, and, being never after heard of, is supposed to have foundered, and all on board to have perished. It is stated by Mr. James Smith, the editor of the voyage, that such was the able and zealous manner in which Commander Clavering co-operated with Captain Sabine, that the latter was not only enabled to make the observations at every station in the most satisfactory manner, but without the slightest accident ever having taken place in moving the numerous and delicate instruments to and from the ship. The observations being completed at Sierra Leone, the places next to be visited were the Island of St. Thomas, Ascension, Bahia, Maranham, Trinidad, Jamaica, and New York; to all of which places Captain Sabine was conveyed in succession by the Pheasant, and made his pendulum observations at each of them in a manner satisfactory to himself; and those observations were published by the Board of Longitude, and will briefly be noticed here. The two officers, it is said, executed a valuable and extensive series of observations on the direction and force of the equatorial current.

Immediately after the arrival of the Pheasant in England, on the 5th of February, 1823, Captain Sabine suggested, through Sir Humphrey Davy, that the extension of similar experiments would be desirable if carried on in high latitudes, and that he was ready (as he ever is when the calls of science require it) to undertake this service. The Griper, gun-brig, was appropriated forthwith for that purpose, and on the 26th of February Clavering was appointed to command her. The plan of the voyage proposed by Captain Sabine was, to proceed in the first instance to Hammerfest, near the North Cape of Norway, about the 70th degree of lati-

tude; thence to a second station, in or near the 80th parallel, on the northern coast of Spitzbergen; afterward to make the east coast of Greenland, in as high a latitude as the barrier of ice, which renders that coast difficult of access, would permit, and having got within the barrier, to ascend the coast to the northward as far as might be compatible the same year, in order to obtain a third pendulum station for Captain Sabine's experiments at the highest degree of latitude that might be there attained.

He was then to return to the southward, and if Captain Sabine should wish for a fourth station on the coast of Iceland, he was to use his discretion, according to the state of the weather and the time of the year, to stop at that island; if not, a fourth station might be sought elsewhere, in or about the same parallel, and after that to return to England. The equipment of the Griper being completed, and the magnetical pendulum, with the various instruments for astronomical and other scientific purposes, being embarked by the second week in May, she sailed from the Nore on the 11th of that month for Hammerfest, where she arrived on the 4th of June.

This place, built on a small island named Qualoen, or Whale Island, is said to consist of about a dozen houses. The bay is small, but the anchorage good and safe; the only provisions to be got here were reindeer, which were cheap; the trade is entirely in fish and oil. The natives are described as kind and hospitable, and were pleased at the idea of a visit from even such a small man-of-war as the Griper. The women are fair and pretty, and dress much like our own; remote from the civilized world, they are untainted by either its vices or its wants. Morality and religion strictly predominate, and deviations from either are rare. Mr. Crowe, an English merchant, who acts as consul, resides here, and paid the visitors much attention. The latitude, 70° 40′; the dip of the needle, 77° 40′.

On the 23d of June, Captain Sabine having finished his observations, the Griper put to sea the same evening; on the 27th, fell in with the first ice off Cherry Island, in latitude 75° 5′, a gale of wind then blowing; saw Spitzbergen in the evening, and fell in with a great

number of walruses. On the 30th rounded Hakluyt's Headland, anchored abreast of a small island, one of the inner Norweys, and the same on which Captain Phipps made his observations in 1773; disembarked the tents and instruments, and sent parties on shore to erect them. Two reindeer and a walrus were killed on the neighboring island of Vogel Sang. From hence Commander Clavering determined to push as far to the northward as he could, while Captain Sabine was carrying on his pendulum observations, leaving here for his assistance a party of six men under the command of Mr. Foster and Mr. Rowland, assistant surgeon, together with his lanch, and six months' provisions and fuel, to carry them to Hammerfest, should any accident happen to the Griper in her absence. He sailed on the 5th of July, and ran due north twenty-five miles from Cloven Cliff; found himself embayed among the ice; and on the 6th the ship struck against something, which turned out to be ice. This was discovered on the fog dispersing, when a field of packed ice presented itself to view, extending east and west as far as the eye could reach; the latitude observed was 80° 20′, which was the most northern obtained, for, having skirted the margin in a line nearly west for about sixty miles, and finding it trending to the southward, and everywhere closely packed, and perceiving no appearance of an opening or of clear water, it was deemed useless to proceed farther, and the Griper returned to the station, which she reached on the 11th of July.

Captain Sabine having completed his operations—a party having killed about fifty reindeer, as a supply of fresh provisions, and every thing being re-embarked on the 22d of July—on the 24th they put to sea, and steered S.W. for the eastern coast of Greenland, a course that would bring them to Gael Hamkes' Bay, in about the latitude of 74°, this being considered as the highest point known to the north on that coast. After many impediments from fields of ice, they reached, on the 8th of August, a tolerably open channel between the ice and the coast, and sent a boat on shore at a point which was named Cape Borlase Warren; "than which," Clavering says, "never was there a more desolate spot

seen; Spitzbergen was, on the whole, a paradise to this place." Proceeding along the coast, among floes of ice, they discovered two islands, to which they gave the name of the Pendulum Islands.

Clavering passed them, and stood on to the northward till stopped by ice; and he had now reached what he considered to be the N.E. point of Greenland, formed by an island, in lat. 75° 12′, from the heights of which could plainly be seen high land, due north, at least as far as lat. 76°. He named the island Shannon Island, and the S.E. extremity Cape Philip Broke, "from the ship it was my good fortune to serve in, and under her gallant commander here named."

Getting under way, the Griper returned to the southward in a narrow channel close to the shore, on which she grounded in $2\frac{1}{2}$ fathoms; was got off by lightening her; anchored in a sheltered bay between one of the Pendulum Islands; landed Captain Sabine, the observatory, tents, and instruments; and prepared the yawl and wherry for a distant excursion, while Sabine was employed in his pendulum experiments. On the 16th of August he set out, taking with him three officers and sixteen men. They landed on Cape Borlase Warren, about eighteen miles to the southward, with each a boat-cloak and a blanket; slept in them, and found no inconvenience from the cold; and this was continued for twelve nights, the temperature not lower than 23°. Here they found traces of natives, and several graves. Proceeding up an arm of the bay, which runs inland, a tent of seal skins was found on the beach, and two natives appeared on the heights. They were at first rather shy, but, by degrees, acquired confidence. They appeared not to differ in any respect from the common race of Esquimaux: the whole tribe amounted but to twelve. Their surprise was roused only by witnessing some of the crew firing at a mark with muskets. A pistol was given to one of the natives, who fired into the water; the recoil startled him so much that he immediately slunk away into his tent. The following morning, being the third, it was found they had all departed, leaving every thing behind them; their sudden retreat being no doubt occasioned by their alarm at the firing.

The party had now advanced to an extensive bay, or, rather, an inland basin, whose circumference could not be less than fifty miles. It was perfectly free of ice, not one piece being visible in this immense sheet of water. Clavering thinks it the same which was discovered by Gael Hamkes in 1654, and which bears his name. In an inlet from this bay, the mountains on both sides were of a great height, ending in immense glaciers, at least 5000 feet high. On the 29th of August they reached the ships, after a fatiguing absence of thirteen days. On the following day Captain Sabine concluded his observations, the tents and instruments were re-embarked, and on the 31st of August the Griper got under way. The latitude of the observatory on Pendulum Island is 74° 32′ 19″ N., longitude 18° 50′ W.

The shore to the southward continued about 3000 feet high, along which the ship proceeded in a channel of clear water, the ice being five or six miles from the shore. About Cape Parry, however, latitude 72½°, in a narrow lane of water, two floes suddenly closed together, and the tongues projecting beneath (*calves* they are usually called), pressed the Griper between them and lifted her abaft considerably out of the water. She got clear without much damage; but the ice was hanging about Cape Parry so close to the shore, that the commander wisely stood out to sea, and on the 13th of September the Griper finally quitted the coast of Greenland, the whole line along which they had sailed being from 2000 to 3000 feet in height, with mountains in the interior perhaps double that height. A violent gale came on, and the ship was secured to a mass of ice; received several severe shocks; the hawsers and stream cables gave way; also two chain cables and two large hawsers; the gale increased; large masses continually rolled in; the pressure became so violent that the whole of them parted before daylight. "Our situation," says the commander, "was now a most anxious one; the gale continued with unabated violence, and the ship drove to the southward among loose ice and heavy floes, which, from the darkness of the night, we could neither see nor avoid." The admirable manner, he says, in which the little Griper had been strengthened, allowed her to bear

the severe shocks without being injured; the heaviest shocks she received must have knocked a Greenlandman to pieces.

The gale continuing, drove them to the southward, and on the 23d of September they made the coast of Norway in latitude 63° 55′. On the 1st of October the Griper struck hard on a sunken rock, and got off undamaged; on the 4th entered Drontheim Fiord, and on the 6th anchored in the harbor; and "we were received," says Clavering, "with the greatest kindness and hospitality." Captain Sabine having completed his experiments here, the Griper proceeded down the fiord on the 13th of October, was detained in the narrows till the 19th, and again windbound till the 3d of December, when she was liberated, and reached Deptford on the 19th of that month, 1823.

We now proceed to give a brief account of Captain Sabine's labors.

The volume of Captain Sabine, from which the following notice is taken, affords an extraordinary instance of personal and mental application on distant voyages and various climates within the Tropics and the Arctic regions, and of intellectual exertion and industry not easily to be paralleled. It consists of more than five hundred pages of observations, carefully arranged under various heads, made with transit instruments, chronometers, clocks, and pendulums; containing, besides, numerous experiments at the several stations touched at by Commander Clavering, as already noticed, amounting to eight in number on the two sides of the Atlantic, at each of which the chief authorities manifested the utmost readiness to afford every assistance, both in our own colonies and at places belonging to foreign powers.

Any attempt here to explain them would give but little notion of the labors successfully accomplished by Captain Sabine; the tables detailing the several kinds of observations must be *seen* in order duly to appreciate their importance, to say nothing of the calculations necessary to arrive at the deductions and conclusions which have resulted from them. The observations may be stated to comprise a series of six in number at each sta-

tion: No. 1. Times of transit of stars, to ascertain the rate of the clock; No. 2. Adjustment of telescope to the same vertical plane; No. 3. Daily rate of chronometers from preceding transits; No. 4. Comparison of chronometer and clock at exact intervals; Nos. 5 and 6 comprise an account of the coincidences in the double series of each pendulum. Each table, of course, occupied several days.

The Pheasant left Sierra Leone early in April, and arrived at New York on the 10th of December; commenced observations on the 22d, and concluded on the 2d of Jan., 1823, in the last two of which Sabine had a co-operator. The observations were carried on at Columbia College; and Captain Sabine says, "I must ever deem myself to have been most highly fortunate in the association which it procured me of the Professor of Natural and Experimental Philosophy and of Chemistry, Mr. James Renwick, whose interest in the experiments was so strongly excited as to induce him to give me his unremitting co-operation, a circumstance peculiarly desirable and satisfactory on an occasion in which the results may hereafter come in question, in the comparison of the standard measurements of the two countries."

On the 5th of February, 1823, the Pheasant arrived at Portsmouth, and Captain Sabine had the satisfaction of finding that a letter which he had written to Sir Humphrey Davy from Maranham, proposing the extension of the experiments to the high latitudes, had met the approbation of the Commissioners of Longitude; that Lord Melville's consent had been obtained for the employment of one of his majesty's ships in its prosecution; and that the Griper sloop of war, which had been engaged in the expedition of 1819–20, would forthwith be commissioned by Commander Clavering. The interval, however, of the Griper's equipment was occupied by Captain Sabine in repeating the trial of the pendulums in Portland Place, to ascertain that they had undergone no alteration in the course and by the events of the preceding voyage.

The process of these experiments, the preparation of an apparatus for the clock and pendulum, and providing cover and protection for the instruments, which experience in the Northern expedition, and particularly at

Melville Island, had taught Captain Sabine to be necessary, were simultaneously completed with the equipment of the Griper. That vessel left the Nore on the 11th of May, and arrived at Hammerfest, the place designated by him as his first station, on the 4th of June. A spot was selected for the observations at Fugleness, where Mr. Crowe, a gentleman at the head of a large commercial establishment, resides, and who gave every possible assistance and attention to the party. Here Captain Sabine repeated the same routine of observations—the transits of the sun and stars—the determination of the rate of chronometers by zenith distances—the coincidences observed with two pendulums. These were all completed by the 23d of June; the instruments embarked, and the Griper arrived at Fair Haven, on the coast of Spitzbergen, on the 1st of July.

The Griper anchored at one of the Norweys, which forms, with the coast of Spitzbergen, the harbor of Fair Haven. Here the experiments proceeded without interruption, being the same series as that practiced at Hammerfest, and were concluded on the 19th of July. From hence Captain Sabine, being desirous of preserving unbroken the continuity of the account of the pendulum experiments, proposed that no time should be lost in proceeding to a proper station on the east coast of Greenland, which the Griper successfully accomplished in a higher latitude than is recorded to have been previously traversed, namely, between the 74th and 75th degrees, in the second week of August. Being stopped, however, soon after he had passed the 75th parallel, and the season advancing, he returned along the coast to a harbor of safe anchorage in latitude 74° 30′, which he had noticed in passing to the northward. Here the Griper was anchored, and became the station for conducting the pendulum experiments.

This harbor is formed by the channel which separates the main land from an island, on which the experiments were made, and which is secured from the access of heavy ice from the ocean by a smaller island in the mid-channel of the entrance. The group, of which these islands form a part, consists of two nearly of the same size, and two others much smaller, being rather rocks

than islands: they extend from the latitude of 74° 30′ to that of 74° 42′, and were distinguished by the officers and seamen of the Griper by the appellation of the Pendulum Islands. It had been the intention of Captain Sabine to make Reikiavik, in Iceland, the concluding station of the pendulum experiments in the high latitudes; but when the 17th of September had arrived, before they found themselves finally disengaged from the Greenland ice—the season of navigation drawing to a close—the autumnal gales already commenced, and the nights above sixteen hours long—it was deemed not prudent to risk the approach to the coast of Iceland. It was, therefore, thought preferable to recross the Northern Ocean, and to seek a pendulum station on the coast of Norway, nearly in the same latitude as Reikiavik; and Drontheim appearing to be the most eligible for the purpose, the Griper arrived there on the 8th of October.

Captain Sabine says, "It had been the good fortune of Captain Clavering and myself to have experienced at each of the inhabited stations which we had visited the most marked hospitality and kindness, but at none were our obligations in these respects greater than at Drontheim." Among others, he mentions the governor (Count Trampe), Mr. Schnitler, the British consul, and Mr. Knutson and his amiable family, from whom every Englishman that visits this part of Norway is sure to meet with a kind reception. Every assistance was afforded toward the accomplishment of this last series of experiments, and they were enabled to weigh anchor at Drontheim on the 13th of November; but, owing to violent gales of wind and very bad weather, the Griper did not arrive at Deptford till the 19th of December, 1823. Captain Sabine says, the boisterous weather they had was accompanied by very vivid lightning, which is particularly unusual in high latitudes in winter, and by the frequent appearance and continuance, for several minutes at a time, of balls of fire at the extremities of the yard arms and mast heads; of these not less than eight were counted at one time.

All the experiments were carefully gone over in London, and examined by the Council of the Royal Society and Board of Longitude, with other individuals most

conversant in these observations, with the calculations for determining the variations in the length of the seconds' pendulum, from whence the following general deduction is drawn for indicating the ellipticity of the earth, which is all that can be given here, the various calculations and the experiments occupying a large volume. The result then is: 39·01520 inches is the length of the equatorial pendulum; 0·20245, the increase of gravitation between the Equator and Pole; and the ellipticity $\frac{1}{289 \cdot 1}$. That deduced from the increase of gravitation between London and Melville Island was $\frac{1}{312 \cdot 6}$.

Thus, says Captain Sabine, "the attempt to determine the figure of the earth, by the variations of gravity at its surface, has been carried into full execution on an arc of the meridian of the greatest accessible extent, and the results which it has produced are seen to be consistent with each other, in combinations too varied to admit a probability of the correspondence being accidental." They are, in fact, the combinations of Captain Sabine's 13 stations; of the French savans' 8 stations; of the British survey, 7 stations; making, in all, 28 stations.

This result, however, of the ellipticity "differs," says Sabine, "more considerably than could have been expected from $\frac{1}{306 \cdot 75}$, which had been previously received on the authority of the most eminent geometrician of the age, as the concurrent indication of the measurements of terrestrial degrees, of pendulum experiments, and of the lunar inequalities dependent on the oblateness of the earth."

The success that has attended the experiment of investigating the figure of the earth by means of the pendulum, encourages, as Captain Sabine thinks, the belief that an equally satisfactory conclusion, and one highly interesting in the comparison, might be obtained by the measurement of terrestrial degrees; that is to say, by an actual measurement of a degree of the meridian. This has, in fact, been done in various parts of the world, but centuries ago, when the instruments were inferior, and the mode of their most advantageous employment less understood than at present. In India an arc has recently been measured, and one of an old date at the Cape of Good Hope remeasured; but Captain

Sabine points out Spitzbergen, being near to the Polar extremity of the meridian, "as the land of most convenient access in either hemisphere." He says:

"The access to all parts of the interior is greatly facilitated by the extensive fiords, and arms of the sea, by which the land is intersected in so remarkable a manner; these, whether frozen over, as in the early part of the season, or open to navigation, as in the later months, form routes of communication suited to the safe conveyance of instruments, either in sledges or boats: the fiord, in particular, which separates the western and eastern divisions of Spitzbergen, would be of great avail: it extends in a due north and south direction for above 120 miles, with a breadth varying from 10 to 30 miles, and communicates at its northern extremity, by a short passage across the land, with the head of another fiord, proceeding to meet it from the northern shores of the island, and affording similar facilities for carrying on either a triangulation, or a direct measurement on the surface of the ice at the level of the ocean."—P. 362.

He adds, what is very true, that the measurement of a portion of the meridian is one of the many experimental inquiries beyond the reach of individual means to accomplish.

This officer, indefatigable in the pursuit of practica science, writes, in February, 1826, to Mr. Davies Gilbert on the subject, enforcing the plan by additional proofs of its practicability, and offering his services: "Should the Council of the Royal Society think that I could be advantageously employed in conducting such an investigation, my services, as you well know, are at their command."

He has, however, been reserved for a more laborious and not a less important task. The geographical determination of the direction and intensity of the magnetic forces at different points of the earth's surface has been regarded as an object worthy of especial research. To examine, in different parts of the globe, the declination, inclination, and intensity of the magnetic force, and their periodical and secular variations, and mutual relations and dependencies, could only be duly investigated in fixed magnetical observatories. On the Continent some such observatories were established, to which, in the year 1836, the attention of British philosophers was

specifically drawn by a letter from the Baron von Humboldt to the Duke of Sussex, then President of the Royal Society. In consequence thereof, observatories for this special purpose were established at Greenwich, Dublin, Canada, Hobart Town, St. Helena, Cape of Good Hope, and other places. The observations made at Toronto have been received, examined, and printed, under the superintendence of Lieutenant-colonel Sabine —a work of extraordinary care and labor.* He has undertaken, besides, to examine and arrange the rest as they come in, which it is expected will be in the course of the present year, 1845. The volume now printed is introduced by an able and well-written preface by Colonel Sabine.

* See note in *Introduction*, p. 17.

CHAPTER VI.

CAPTAIN PARRY'S SECOND VOYAGE.

1821–22–23.

Journal of a Second Voyage for the Discovery of a North-west Passage from the Atlantic to the Pacific, in his Majesty's ships Fury and Hecla.

THE two vessels appointed for this voyage were strong and well-built bombs: the Fury, of 377 tons, and the Hecla, 375 tons; commanded, officered, and manned as under:

FURY.	HECLA.
W. Edward Parry, Commander.	Geo. Francis Lyon, Commander.
George Fisher, Chaplain and Astronomer.	Hen. Perkyns Hoppner, Charles Palmer, } Lieuts.
Joseph Nias, Andrew Reid, } Lieutenants.	Alexander Fisher, Surgeon.
John Edwards, Surgeon.	John Jermain, Purser.
W. Harvey Hooper, Purser.	Allan M'Laren, Assist. Surgeon.
James Skeoch, Assist. Surgeon.	Joseph Sherer, Charles Richards, W. Nelson Griffiths, Edward Bird, } Midshipmen.
John Henderson, Fr. R. M. Crozier, Jas. Clarke Ross, } Midshipmen.	William Mogg, Clerk.
John Bushnan, Assistant Surveyor and Midshipman.	11 Officers.
James Hulse, Clerk.	Joseph Macklin, Gunner.
12 Officers.	Joseph Lilly, Boatswain.
5 Warrant Officers.	Charles Purfur, Carpenter.
11 Petty Officers.	George Fife, Greenland Master.
24 Able Seamen.	Alexander Elder, do. Mate.
8 Marines (including 1 Sergeant).	5 Warrant Officers.
60 Total on board.	11 Petty Officers.
	24 Able Seamen.
	7 Marines.
	58 Total on board.

GEORGE FRANCIS LYON was a smart, clever lieutenant, at first appointed as acting in the Berwick by Sir Edward Pellew; he was wounded in an attack made on that ship's boats, and had his commission confirmed to her in 1814. He was then appointed to the Albion, and was in the battle of Algiers in 1816. Being of an adventurous turn, while he was serving in the squadron under Sir Charles Penrose, he asked and obtained per-

mission from Sir Charles to join Mr. Ritchie, a gentleman appointed on a mission to Tripoli, Mourzouk, and other parts of North Africa, who was most desirous of having a naval officer to accompany him. Ritchie died shortly after, and Lyon succeeded him; who concluded, reasonably enough, that among the Arab tribes the *lieutenant* might advantageously take upon him the title of captain—a rank which, it appears, he nominally carried into the present voyage of discovery. On his appointment to the Hecla he received the rank of commander, and on the return of the ships in 1823 was raised to that of captain.

Many of the officers who had served on the first voyage were employed on this: HOPPNER, as lieutenant of the Hecla; EDWARDS, as surgeon; Midshipman PALMER, as lieutenant of the Hecla. The midshipmen NIAS and REID were promoted as lieutenants of the Fury, and Ross, Bushnan, and Griffiths remained to serve as midshipmen. Hooper, the purser, and Hulse, the clerk, each continued, as did Allison and Crawford, the Greenland master and mate, in the service, and aboard the Fury. She had also four midshipmen: two new ones, JOHN HENDERSON and F. R. M. CROZIER, besides Ross and BUSHNAN, who had served in the preceding voyage.

Commander Parry observing on the late expedition a large inlet, not less than ten leagues wide at its mouth, opening out on the southern coast of Barrow's Strait, and extending southernly, with an inclination to the westward, ran the ships into it, and continued to the southward about one hundred and twenty miles. The soundings were found to be two hundred fathoms and upward. The closeness of the ice, however, to the southwest induced him to return to the northward; but his impression was, that this strait might lead to the coast of America, and that the east and west lands which enclose it were probably islands; and he says, "On an inspection of the charts, I think it will also appear probable that a communication will one day be found to exist between this inlet and Hudson's Bay, either through the broad and unexplored channel called Sir Thomas Roe's Welcome, or through Repulse Bay, which has not yet been satisfactorily examined. It is

also probable that a channel will be found to exist between the western land and the northern coast of America."

In the passage above quoted a foundation appears to have been laid for a voyage, if not two, in farther search of a northwest passage. That search was not likely to be abandoned when so experienced and talented a man as Commander Parry pointed out what appeared to be a channel by which a passage might be found through the western land to the northern coast of America. Accordingly, in a few months after his return from the last voyage, on the 30th of December, 1820, a commission was signed appointing him commander of the Fury, and on the 4th of January Lieutenant Lyon was appointed commander of the Hecla.

His majesty having, on the representation of Lord Melville, ordered another attempt to be made to discover a passage by sea between the Atlantic and Pacific Oceans, and to ascertain the geography of the northern boundaries of the American continent, Parry's instructions were to proceed toward or into Hudson's Strait. He was then to penetrate to the westward through that strait until he should reach, either in Repulse Bay or on some other part of the shore of Hudson's Bay, to the north of Wager River, some portion of the coast which he should feel convinced to be a portion of the continent of America. Failing of this, he was then to keep along the line of this coast to the northward, always examining every bend or inlet which should appear likely to afford a practicable passage to the westward, in which direction it was the principal object of the voyage to endeavor to find a way from the Atlantic to the Pacific.* These instructions were sufficiently explicit, and accorded with the view taken by Commander Parry in his narrative of the former voyage.

On the 8th of May, 1821, the Fury and Hecla, accompanied by the Nautilus transport (freighted with stores and provisions to be transhipped on arriving at the ice), sailed from the Nore, and, owing to bad weather, it was not till the 14th of June that they found themselves in latitude 60° 48′, and saw the first iceberg. At

* Admiralty Instructions.

the depth of 460 fathoms the temperature of the sea was 40°, that of the surface, 40½°, and that of the air, 41½°. On the 2d of July they were close to Resolution Island, the valleys of which were filled with snow, and, with the fog that hung over it, "rendered the scene before us indescribably dreary and disagreeable." "It requires," says Commander Parry, "a few days to be passed amid scenes of this nature to erase, in a certain degree, the impressions left by more animated landscapes; and not till then, perhaps, does the eye become familiarized, and the mind reconciled, to prospects of utter barrenness and desolation such as these rugged shores present." The numerous icebergs, of which Commander Lyon counted fifty-four in sight at one time, some of them not less than two hundred feet above the sea, were not calculated to enliven the scene.

On the 2d the ships were closely beset, though drifting rapidly about by the tides during the night. The ice consisted of loose masses of broken floes, among which the ships continued to be driven, sometimes in one direction and then in an opposite one; and among these masses were counted thirty icebergs in sight at a time, many of them whirled about by the tides with great rapidity. Several of these immense bodies were from fifty to ninety feet above the surface of the sea, each probably almost as many fathoms below it. The commander, however, states that the bergs which thus drive about are less dangerous to approach than those aground, against which a ship is liable to be carried with the whole force of the tide.

On the 8th they were still drifting about among the ice, close to Resolution Island, without knowing, during the night, in what direction they were carried; but when it cleared up, they were surprised to find the Hecla eleven or twelve miles to the westward, though still beset in the ice. On the 9th the ice closed round them, and they remained immovably beset for a week, though carried by it daily from one to four miles. This is precisely what was alluded to at the conclusion of the last expedition; and it appears that the two ships were in less danger (in fact, there was none) than those on the shore of Melville Island. They were still, however, in the on-

trance only of Hudson's Strait, which, being exposed to the swell of the main ocean, and completely open to the influence of the whole Atlantic, has always been considered, by the ships of the Hudson's Bay Company, a most dangerous and difficult position: three of these were seen here in a similar predicament with the discovery ships. In proceeding up the strait, several Esquimaux canoes, or *kayaks*, made their appearance, offering seal and whale oil, spears, skins of the seal, bear, fox, &c., for sale. After them came a large *oomiak*, or woman's boat; their filthy customs, however, disgusted the seamen, who gave them no sort of encouragement.

"On the whole," says Parry, "it was impossible for us not to receive a very unfavorable impression of the general behavior and moral character of the natives of this part of Hudson's Strait, who seem to have acquired, by an annual intercourse with our ships for nearly a hundred years, many of the vices which unhappily attend a first intercourse with the civilized world, without having imbibed any of the virtues or refinements which adorn and render it happy."

Having reached Southampton Island, near its northern extremity, where the continuity of the land appeared to be dissolved, Parry concluded they were not far from the eastern entrance of the *Frozen Strait*, which had occasioned so much angry discussion, a hundred years ago, as to whether any such strait existed, or whether it was not a chimera invented by Captain Middleton. As this geographical point had never been decided, Parry had some difficulty in determining the question of trying it or not, as, in his present position with regard to Repulse Bay, which he was ordered to examine, the distance was not more by passing that strait than fifty leagues, whereas, if compelled to pursue a route round the south end of Southampton Island, it would make the distance from one hundred and seventy to two hundred leagues. "After the most anxious consideration, I came to the resolution of attempting the direct passage of the Frozen Strait, though, I confess, not without some apprehension of the risk I was incurring, and of the serious loss of time which—in case of failure, either from the non-existence of the strait, or from the insuperable

obstacles which its name implies—would thus be inevitably occasioned to the expedition."

His decision was right; and, though much hampered by floes, and hommocs, and packs of ice, he was still less so than in the neighborhood of Resolution Island; and he was rewarded by the discovery, not far from its entrance, of what he calls "a magnificent bay," which the officers honored with the name of the "Duke of York's Bay," having been first entered on his birthday. It is situated on the northeastern extremity of Southampton Island. The bay, however, on the western side was shut in by a low shore, which it was concluded could be no other than "the low, shingly beach, like Dungeness," of Middleton.

He found it necessary, therefore, to retrace his steps, and to encounter once more the Frozen Strait, with its rocks and islets, its irregular tides and hommocs of floating ice; and what was, perhaps, worse than all, dark, foggy weather, with compasses that had almost lost their action. He soon, however, got into water nearly free from ice, which allowed him to proceed westerly, but entirely by the lead for five or six hours, when, on the weather clearing up, he found himself almost entirely surrounded by land, "having unconsciously entered Repulse Bay, in which not a piece of ice was to be seen that could obstruct us in its thorough examination."

This full examination was certainly given to it; and whatever doubts might hitherto have been entertained respecting its communication with the Polar Sea, Commander Parry and his party, by their complete investigation of the whole of its shores, have set that question entirely at rest. The boats entered every little creek and corner, "and thus was the question settled as to the continuity of land round Repulse Bay, and the doubts and conjectures which had so long been entertained respecting it set at rest forever." Parry takes the opportunity, moreover, of doing ample justice to that injured and persecuted navigator, Captain Middleton. "The whole account," he says, "that he has given of this bay, with the exception of its geographical position, is in general very accurate, particularly in the appearance of the lands, their relative situation, and in the nature and depth

of the soundings." And with respect to the Frozen Strait, there can be little doubt, he says, that the account which Middleton has given of its appearance, as seen from Cape Frigid, is in the main a faithful one: "Above all, the accuracy of Captain Middleton is manifest upon the point most strenuously argued against him by Mr. Dobbs; for our subsequent experience has not left the smallest doubt of Repulse Bay, and the northern part of the Welcome, being filled with a rapid tide, flowing into it from the eastward, through the Frozen Strait."

The appearance of the shores of Repulse Bay was far from uninviting. "The surrounding land rose from six or seven hundred to a thousand feet, and there was no want of vegetation usually found in this part of the Arctic regions, and in many parts it was extremely luxuriant." Reindeer and hares were plentiful; so were ducks, dovekies, and snow-buntings. Several black whales also were observed in the bay. In one spot the remains of no less than sixty Esquimaux habitations were found, consisting of stones laid one over the other, in very regular circles, eight or nine feet in diameter; besides about a hundred artificial structures, fireplaces, store-houses, and other walled enclosures four or five feet high, used for keeping their skin canoes from being gnawed by the dogs. In various parts of the shore were found numbers of circles of stones, which were supposed to have been burying-places, a human skull being found near one of them. Among these stones the Hudson mouse was very abundant. "I do not know," says Parry, "whether the seals' flesh remaining on some of the bones was any attraction to these creatures, but it is certain that, when two of them were put together into a cage, the larger killed the other, and ate a part of it."

Commander Parry having now satisfactorily determined the non-existence of a passage to the westward through Repulse Bay, he was next, in compliance with his instructions, "to keep along the line of this coast to the northward, always examining every bend or inlet which might appear likely to afford a practicable passage to the westward;" and he congratulates himself on having reached this point so early, and especially "at having passed, almost without impediment, the strait to

which, on nearly the same day seventy-nine years before, so forbidding a name had been applied."

He had not yet, however, got rid of that formidable strait, with its obnoxious name. In coasting down the northern shore of Repulse Bay, it was necessary again to cross the northern part of the Frozen Strait, and pass through Hurd's Channel, which was nearly blocked up by Bushnan Island, leaving only a narrow passage at each extremity to get to the eastward; and, when passed, other islands and narrow channels occur, among which were found such rapid tides, hurling large masses of ice about, as to carry the ships every moment into imminent danger. And when they had in some measure got through this labyrinth, after long, anxious, and toilsome labor, a fresh gale from the northward, on the 3d of September, drifted the large floe of ice to which the ships were attached to a greater distance than "I ever remember," says Parry, "to have happened before in the same time under any circumstances." But the most mortifying of all was the discovery that, after all their toil, they had been driven back past Baffin Island toward the two remarkable hills on Southampton Island, from which they were at noon not more than seven or eight leagues distant. "Thus," says Parry, "after a laborious investigation, which occupied one month, we had, by a concurrence of unavoidable circumstances, returned to nearly the same spot as that on which we had been on the 6th of August. This untoward event may serve to show the value of even the smallest geographical information, in seas where not an hour must be thrown away or unprofitably employed."

The whole of this voyage, from the first entrance of Hudson's Strait to the point now reached, has proved so harassing, so unproductive, and so dangerous withal, as to have required from him who had the conducting of it a more than ordinary share of patience, perseverance, and equanimity, possessing a temper not easily to be ruffled; and such an officer was Parry. His great object, when in extreme difficulty, he tells us, was to cheer up the spirits of his people, and to keep them constantly on the alert and moving whenever such difficulty occurred, even when there was no prospect of

the ships' stirring; to keep, in short, both their bodies and minds in a state of activity. Thus he says on the present disheartening occasion, "In the afternoon an attempt was made to move, for the mere sake, it must be confessed, of moving and keeping the people on the alert, rather than with the slightest prospect of gaining any ground."

Indeed, throughout the whole of his Arctic voyages of discovery, the resources of his own mind never failed to supply the means of conveying a happy state of contentment into the minds of those who were serving under him, and of gaining their confidence. The present was a trying moment. The 5th of September had arrived, the navigable season had nearly expired, and they were only at the commencement of their discoveries. By the 15th of September, however, they had examined numerous inlets and openings on the American coast, and among others, a very extensive and deep one, to which Parry gave the name of Lyon's Inlet. Various creeks and coves were also examined by the boats; but the continuity of the land was every where determined, and no passage found to the westward. They fell in with a small tribe of Esquimaux, whose habitations were visited, and the inmates found to be "a good-humored and decent sort of people." One lad, in particular, is described as "uncommonly quick and clever in comprehending our meaning, and seemed to possess a degree of good-humor and docility which, on our short acquaintance, made him a great favorite among us."

In some of the bays and inlets the ice remained fixed and unbroken, and, as far as could be seen, grounded along the coast. Still they proceeded, passing by no creek or inlet without landing or boating to examine it thoroughly. On the 1st of October some rain fell, which, immediately freezing, made the decks and ropes as smooth and slippery as glass. For several days before, the thermometer had permanently fallen below the freezing point; and the rapid formation of young ice near the shores gave pretty evident notice of the approach of winter. On the 6th of October, Parry says, "There being now only an hour's daylight remaining,

the young ice fast increasing, and a strong tide running in the offing, I was obliged to relinquish the idea of moving till the morning." On the 8th the thermometer was down to zero, and the sea was covered with young ice, of which we have the following description:

"The formation of young ice upon the surface of the water is the circumstance which most decidedly begins to put a stop to the navigation of these seas, and warns the seaman that his season of active operations is nearly at an end. It is indeed scarcely possible to conceive the degree of hinderance occasioned by this impediment, trifling as it always appears before it is encountered. When the sheet has acquired a thickness of about half an inch, and is of considerable extent, a ship is liable to be stopped by it unless favored by a strong and free wind; and even when still retaining her way through the water, at the rate of a mile an hour, her course is not always under the control of the helmsman, though assisted by the nicest attention to the action of the sails, but depends upon some accidental increase or decrease in the thickness of the sheet of ice, with which one bow or the other comes in contact. Nor is it possible in this situation for the boats to render their usual assistance, by running out lines or otherwise; for, having once entered the young ice, they can only be propelled slowly through it by digging the oars and boat-hooks into it, at the same time breaking it across the bows, and by rolling the boat from side to side. After continuing this laborious work for some time with little good effect, and considerable damage to the planks and oars, a boat is often obliged to return the same way that she came, backing out in the canal thus formed to no purpose. A ship in this helpless state, her sails in vain expanded to a favorable breeze, her ordinary resources failing, and suddenly arrested in her course upon the element through which she has been accustomed to move without restraint, has often reminded me of Gulliver tied down by the feeble hands of Lilliputians; nor are the struggles she makes to effect a release, and the apparent insignificance of the means by which her efforts are opposed, the least just or the least vexatious part of the resemblance."—P. 116, 117.

The expediency of fixing upon some eligible place for the security of the ships for the winter could no longer be doubted nor delayed. A small island lying off the northern point of the entrance into Lyon's Inlet was agreed upon by the two commanders, being found to afford good anchorage on its southern coast. "We

now," says Parry, "for the first time *walked* on board the ships, and before night we had them moved into their places by sawing a canal for two or three hundred yards through the ice." He adds:

"In reviewing the events of this our first season of navigation, and considering what progress we had made toward the attainment of our main object, it was impossible, however trifling that progress might appear upon the chart, not to experience considerable satisfaction. Small as our actual advance had been toward Behring's Strait, the extent of coast newly discovered and minutely explored in pursuit of our objects, in the course of the last eight weeks, amounted to more than 200 leagues, nearly half of which belonged to the continent of North America. This service, notwithstanding our constant exposure to the risks which intricate, shoal, and unknown channels, a sea loaded with ice, and a rapid tide concurred in presenting, had providentially been effected without injury to the ships, or suffering to the officers and men; and we had now once more met with tolerable security for the ensuing winter, when obliged to relinquish farther operations for the season. Above all, however, I derived the most sincere satisfaction from a conviction of having left no part of the coast from Repulse Bay eastward in a state of doubt as to its connection with the continent. And as the main-land, now in sight from the hills, extended no farther to the eastward than about a N.N.E. bearing, we ventured to indulge a sanguine hope of our being very near the north-eastern boundary of America, and that the early part of the next season would find us employing our best efforts in pushing along its northern shores."—P. 113.

Being now fixed in their winter quarters, it is scarcely necessary to say that the first and earliest attention of the provident commander was directed to the security of the ships, the arrangements for the preservation of cleanliness, health, and comfort during a long prospective winter, as well as for the economical expenditure of provisions, fuel, and all other stores. At first, and for some time, apprehension was entertained respecting the security of the ships in an open roadstead facing the south, as the grounded masses on the shores of the bay began to show symptoms of instability, one or two having fallen over, and others turned round, so that, instead of being a protection, these masses might be looked upon rather as dangerous neighbors: other circumstances

were calculated to excite apprehensions of danger, but, happily, they escaped them all; and the ships, once frozen in and beset by solid ice, remained firm as rocks.

It may be quite certain that nothing was omitted by Parry that could tend to the health and comfort of his crew, as due attention to cleanliness, superior warmth, drying of clothes, airing the bedding, and sleeping in hammocs, by which ventilation is materially promoted. He says:

"While care was thus taken to adopt all physical means within our reach for the maintenance of health and comfort among the crews, recourse was also had to some of a moral nature, which experience has shown to be useful auxiliaries in the promotion of these desirable objects. It would, perhaps, indeed be difficult to imagine a situation in which cheerfulness is more to be desired, or less likely to be maintained, than among a set of persons (and those persons seamen too) secluded for an uncertain and indefinite period from the rest of the world; having little or no employment but that which is in a manner created to prevent idleness, and subject to a degree of tedious monotony ill according with their usual habits. It was not, however, simply as a general principle, applicable in a greater or less degree to all situations and societies, that the preservation of cheerfulness and good humor was in our case particularly desirable, but as immediately connected with the prevention of that disease to which our crews were most liable, and which indeed, in all human probability, we had alone any cause to dread. The astonishing effects produced by the passions of the mind, in inducing or removing scorbutic symptoms, are too well known to need confirmation or to admit of doubt; those calculated to excite hope and to impart a sensation of pleasure to the mind having been invariably found to aid in a surprising manner the cure of this extraordinary disease, and those of an opposite nature to aggravate its fatal malignity. As a source, therefore, of rational amusement to the men, I proposed to Commander Lyon and the officers of both ships once more to set on foot a series of theatrical entertainments, from which so much benefit in this way had on a former occasion been derived. This proposal was immediately and unanimously acquiesced in. Lyon obligingly undertook to be our manager, and some preparation having been made for this purpose previous to leaving England, every thing was soon arranged for performing a play on board the Fury once a fortnight. In this, as in more important matters, our former experience gave many

useful hints. Our theater was now laid out on a larger and more commodious scale; its decorations much improved; and, what was more essential both to actors and audience, a more efficient plan adopted for warming it, by which we succeeded in keeping the temperature several degrees above *zero* on each night of performance throughout the winter."—P. 122, 123.

And he adds, in a note,

"I can not omit to mention that, just before we left England, a large and handsome *phantasmagoria*, or magic lantern, had been presented to me, for the use of the expedition, by a lady, who persisted in keeping her name a secret from those whom she was thus serving. This apparatus, which was excellent of its kind, was frequently resorted to during this and the succeeding winter; and I am happy to avail myself of this mode—the only one in my power—of thanking our benefactress, and assuring her that her present afforded a fund of amusement, fully answering her kind intentions."

No man was better acquainted with the character and feelings of seamen than Parry. He knew that mirth, and other excitements to cheerfulness, if too often repeated with little or no variation, are apt to lose their effect. Fully aware of this, and with a view to higher objects, it did not escape his reflection that, during the long winter nights, when for a certain period the whole day was in fact a night, an opportunity might be afforded for instructing the men of both ships in at least the elementary parts of education. To this end he says,

"To furnish rational and useful occupation to the men on the other evenings, a school was also established, under the voluntary superintendence of Mr. Hulse, for the instruction of such of the men as were willing to take advantage of this opportunity of learning to read and write, or of improving in those acquirements. The same plan was adopted on board the Hecla, Benjamin White, one of the seamen, who had been educated at Christ-church school, volunteering to officiate as schoolmaster. Tables were set up for the purpose in the midship part of the lower deck; some of the men, already thus qualified, undertook the task of assisting in the instruction of their shipmates; and thus were about twenty individuals belonging to each ship occupied every evening, from six to eight o'clock. I made a point of visiting the school occasionally during the winter, by way of encouraging the men in this praiseworthy occupation, and I can safely say that I have

seldom experienced feelings of higher gratification than on this rare and interesting sight."—P. 123, 124.

And well might he be gratified; for we are assured by him, on the return of the ships to England, that "every man on board could read his Bible."

Nor were the interests of science neglected while these domestic arrangements were in progress. A portable observatory was erected for magnetical observations, and a house built for the reception of the requisite instruments for astronomical observations, and for various experiments recommended by a committee of the Royal Society. In short, nothing was neglected or omitted that could contribute to the fulfillment of the instructions received by the commander of the expedition from the Lords of the Admiralty.

An observation of Parry shows that the Arctic climate, equally with our own, is influenced by a change of the wind. Thus, on the 20th of October, when the wind was N.N.W., the thermometer fell to —10°; but veering to the S.E. on the 24th and 25th, it rose to +23°. "I may possibly," he says, "incur the charge of affectation in stating that this temperature was much too high to be agreeable to us; but it is, nevertheless, the fact, that every body felt and complained of the change. This is explained by their clothing, bedding, fires, and other precautions against the severity of the climate, having been once adapted to a low degree of cold, an increase of temperature renders them oppressive and inconvenient." Another circumstance is mentioned, which may serve to confirm a conjecture which has long been maintained by some, that an open sea, free of ice, exists at or near the Pole. "On the 2d of November" says Parry, "the wind, freshened up to a gale from N. by W., lowered the thermometer before midnight to —5°, whereas a rise of wind at Melville Island was generally accompanied by a simultaneous rise in the thermometer at low temperatures. May not this," he asks, "be occasioned by the wind blowing over an open sea in the quarter from which the wind blows, and tends to confirm the opinion that at or near the Pole an open sea free of ice exists?" If the ice which a single night of six months' continuous duration must produce were not dispersed by the current that is known

to exist, and which the Pole itself may probably be the cause of producing, the north wind, instead of being cold and boisterous, would be mild. The aurora and haloes round the sun and moon were of frequent appearance, but none of them very remarkable. The magnetic needle, attentively watched, was not found to be at all affected by any of these phenomena.

The shortest day passed without any interest being attached to it. "On a former occasion, novelty and the peculiarity of our situation gave it importance. Now the case was very different; their wintering was no longer an experiment; their comforts were greatly increased, and the prospect of an early release as favorable as could be desired." On Christmas-day divine service was performed on board the Fury, and attended by the officers and crews of both ships; an additional allowance of provisions was issued, "and the day was marked by the most cheerful hilarity, accompanied by the utmost regularity and good order." Among the luxuries was a joint of good English roast beef, preserved by the outside being rubbed with salt. The last day of the year brought with it the high gratification of observing the excellent health and spirits enjoyed by almost every officer and man in both ships. The one invalid was so much improved that sanguine hopes were entertained of his continued amendment.

Having provided for the employment and recreation of the men, Parry still seemed to think that it might be imagined, as, indeed, had been anticipated, that want of novelty was a disadvantage likely to render the confinement of the officers more tedious than before at Melville Island; but this, he says, was not the case; the men had always employment enough to prevent their being idle, though not, perhaps, sufficient to prevent unpleasant thoughts from occasionally obtruding themselves; but the officers also had mostly resources within themselves. With regard to them, he observes, that "what with reading, writing, making and calculating observations, observing the various natural phenomena, and taking the exercise necessary to preserve our health, nobody, I believe, ever felt any symptoms of *ennui* during our continuance in winter quarters." He adds:

"Among the recreations which afforded the highest gratification to several among us, I may mention the musical parties we were enabled to muster, and which assembled, on stated evenings throughout the winter, alternately in Commander Lyon's cabin and in my own. More skillful amateurs in music might well have smiled at these, our humble concerts; but it will not incline them to think less of the science they admire to be assured that, in these remote and desolate regions of the globe, it has often furnished us with the most pleasurable sensations which our situation was capable of affording; for, independently of the mere gratification afforded to the ear by music, there is, perhaps, scarcely a person in the world, really fond of it, in whose mind its sound is not more or less connected with 'his far-distant home.' There are always some remembrances which render them inseparable, and those associations are not to be despised which, while we are engaged in the performance of our duty, can still occasionally transport us into the social circle of our friends at home, in spite of the oceans that roll between us.

"With our time thus occupied, our comforts so abundant, and the prospect to seaward so enlivening, it would indeed have been our own faults had we felt any thing but enjoyment in our present state, and the most lively hopes and expecta tions for the future."—P. 143.

The first day of the new year is described as being a very severe one in the open air, the thermometer down to —22°, and the wind blowing strong from the N.W., on which it may be observed, that the effect of a strong breeze on the feelings, even in temperate climates, is well known, but at low temperatures it becomes painful and almost insupportable. "Thus," says Parry, "with the thermometer at —55°, and no wind stirring, the hands may remain uncovered for ten minutes or a quarter of an hour without inconvenience; while, with a fresh breeze, and the thermometer nearly as high as zero, few people can keep their hands exposed so long without considerable pain." By means of Sylvester's stove, however, and a judicious arrangement of the flues, no inconvenience was felt in the ships, even at the temperature of —59°.

During the cold month of January frequent opportunities occurred of making a variety of meteorological observations on the Aurora Borealis, on parhelia, and paraselenæ, and, at the same time, Mr. Fisher was fully

employed in observing the dip, variation, and inclination of the magnetic needle. The electrometer was frequently applied to the mast-head chain, and the magnetic needle constantly watched during all the appearances of the Aurora; but neither of these was on any one occasion sensibly affected. Franklin, it may be observed, on the shores of the Polar Sea, found it otherwise.

On the 1st of February a new source of novelty and amusement most unexpectedly presented itself in the approach of some strange people toward the ships. But Parry must describe the interview.

"On the morning of the 1st of February it was reported to me that a number of strange people were seen to the westward, coming toward the ships over the ice. On directing a glass toward them we found them to be Esquimaux, and also discovered some appearance of huts on shore at the distance of two miles from the ships, in the same direction. I immediately set out, accompanied by Commander Lyon, an officer from each ship, and two of the men, to meet the natives, who, to the number of five-and-twenty, were drawn up in a line abreast, and still advanced slowly toward us. As we approached nearer they stood still, remaining as before, in a compact line, from which they did not move for some time after we reached them. Nothing could exceed their quiet and orderly behavior on this occasion, which presented a very striking contrast with the noisy demeanor of the natives of Hudson's Strait. They appeared at a distance to have arrows in their hands, but what we had taken for bows or spears proved to be only a few blades of whalebone, which they had brought either as a peace-offering or for barter, and which we immediately purchased for a few small nails and beads. Some of the women, of whom there were three or four, as well as two children, in this party, having handsome clothes on, which attracted our attention, they began, to our utter astonishment and consternation, to strip, though the thermometer stood at 23° below zero. We soon found, however, that there was nothing so dreadful in this as we at first imagined, every individual among them having on a complete double suit. The whole were of deer skin, and looked both clean and comfortable."—P. 159.

This party conducted themselves with great decorum, and without any apprehension visible on their countenances or manner; therefore, as soon as all that they had to sell had been purchased, a wish was expressed by

signs to accompany them to their huts. The description which follows is curious and interesting:

"When it is remembered that these habitations were fully within sight of the ships, and how many eyes were continually on the look-out among us for any thing that could afford variety or interest in our present situation, our surprise may in some degree be imagined at finding an establishment of five huts, with canoes, sledges, dogs, and above sixty men, women, and children, as regularly, and to all appearance as permanently fixed, as if they had occupied the same spot for the whole winter. If the first view of the exterior of this little village was such as to create astonishment, that feeling was in no small degree heightened on accepting the invitation soon given us to enter these extraordinary houses, in the construction of which we observed that not a single material was used but snow and ice. After creeping through two low passages, having each its arched door-way, we came to a small circular apartment, of which the roof was a perfect arched dome. From this three door-ways, also arched and of larger dimensions than the outer ones, led into as many inhabited apartments, one on each side, and the other facing us as we entered. The interior of these presented a scene no less novel than interesting. The women were seated on the beds at the sides of the huts, each having her little fireplace, or lamp, with all her domestic utensils about her; the children crept behind their mothers, and the dogs, except the female ones, which were indulged with a part of the beds, slunk out past us in dismay. The construction of this inhabited part of the huts was similar to that of the outer apartment, being a dome formed by separate blocks of snow, laid with great regularity and no small art, each being cut into the shape requisite to form a substantial arch, from seven to eight feet high in the center, and having no support whatever but what this principle of building supplied. I shall not here farther describe the peculiarities of these curious edifices, remarking only that a cheerful and sufficient light was admitted to them by a circular window of ice, neatly fitted into the roof of each apartment."—P. 106.

When we reflect how many volumes have been written, how much discussion has taken place, how much learned conjecture on the invention and origin of the arch, even in this later age, what merit are we prepared to bestow on one of the most rude, the most simple, and most isolated race of human beings that exist? Nature, assisted perhaps by observation, has taught this people the true principle and construction of the arch.

"We found," says Parry, "our new acquaintance as desirous of pleasing us as we were ready to be pleased." A favorable impression was made on the first interview, which was not diminished during a constant intercourse of three or four months. These poor creatures, who, with all their unfortunate race, have been thrown by fate into the least habitable portions of the globe, amid eternal ice and snow, possess many valuable and amiable qualities, among some others that are less so, and are common to all savage or uneducated people. Those of the tribe here met with are described in their behavior as being in the highest degree respectful, orderly, and good humored. They gave the voyagers every reason to believe that they possessed, in no ordinary degree, the quality of honesty — a quality not usually found among an uncivilized people; "but a quality," Parry observes, "the more desirable to us, as we had on shore, besides the house and observatory, all our boats and other articles, which, had they been disposed to pilfer, it would have required all our vigilance to guard. If we dropped a glove or a handkerchief without knowing it, they would immediately direct our attention to it by pointing; and if the owner had left the hut before they discovered it, they would run out after him to return it. Nay, more, if any thing happened to be left at the huts, they would travel down to the ships to return it to the owner. A pair of their dogs was purchased for the Hecla, which broke loose and disappeared; but next day two were found chained up on board the Fury, which, on inquiry, proved to be the animals in question, and which had thus been faithfully restored to their rightful owners." Many other instances satisfied the voyagers that dishonesty is not a prominent vice among these poor people.

Judging from the sample who visited the ships at Winter Island, they exhibit none of those traits of stupidity by which they have generally been distinguished, but would rather appear to be lively and cheerful than to show any signs of dullness. Quiet and orderly, however, as they were disposed to be on their first visit, they betrayed a strong inclination to merriment; for Parry observes, that on Commander Lyon's ordering

his fiddler to exhibit upon the Hecla's deck, they danced with the seamen for an hour, and then returned in high glee and good humor to their huts. Another party took great delight in listening to the organ, and to any thing in the shape of music, singing, or dancing, of all which they appeared to be remarkably fond.

The same party were asked to go through the process of building a snow-hut for the amusement and information of the Europeans. "From the quickness," says Parry, "with which they completed this, our surprise at the sudden appearance of the village ceased, as we now saw that two or three hours would be more than sufficient to have completed the whole establishment just as we at first found it." The following day a number of natives came on board, according to promise, to rebuild the hut in a more substantial manner, and to put a plate of ice in the roof as a window, which they did with great quickness as well as care, several of the women cheerfully assisting in the labor. The men seemed to take no small pride in showing in how expeditious and workmanlike a manner they could perform this; and the hut, with its outer passage, was soon completed. But they extend the use of this transparent material, applying that of frozen hommocs to other purposes. A sledge was required to carry a youth to some distance, and none at hand:

"We found, however, that a man, whom we had observed for some time at work among the hommocs of ice upon the beach, had been employed in cutting out of that abundant material a neat and serviceable little sledge, hollowed like a bowl or tray out of a solid block, and smoothly rounded at the bottom. The thong to which the dogs were attached was secured to a groove cut round its upper edge; and the young seal-catcher, seated in this simple vehicle, was dragged along with great convenience and comfort."—P. 206.

Captain Parry being desirous of trying how far they might be disposed to part with their children, proposed to buy a fine lad, named Tooloook, for the valuable consideration of a handsome butcher's knife. His father, apparently understanding the meaning, joyfully accepted the knife, and the boy set off in high spirits, and at first assisted in drawing a sledge; but beginning, by some

additional signs, more clearly to comprehend the true meaning of his situation, took the opportunity to slink off among some hommocs of ice, so that, when the party arrived on board, Toolooak was missing.

Toolooak, however, was a constant visitor to Parry, and considered himself fully privileged to find his way into the cabin. "He sat with me," says Parry, "one day for a couple of hours, quietly drawing faces and animals, an occupation to which he took a great fancy, and we often were reminded by this circumstance of a similar propensity displayed by his amiable countryman, our lamented friend, John Sackhouse." He goes on to say: "We soon found that Toolooak possessed a capacity equal to any thing he chose to take an interest in learning; and could he, at his present age, have been voluntarily removed from his companions, and his attention directed to the acquirement of higher branches of knowledge than that of catching seals, he would amply have repaid any pains bestowed upon his education."

An overture made by Parry to this effect, and of removing him, brought forward, as it was intended, a fine trait of feeling and character in this youth, and probably not uncommon in this too much despised people. Parry adds:

"I had always entertained a great objection to taking away any such individual from his home, on the doubtful chance of benefiting himself, or of his doing any service to the public as an interpreter. My scruples on this head had hitherto been confined to the consideration due to the individual himself, and to the relatives he leaves behind. In our present case, however, not the smallest public advantage could be derived from it; for it had long ago become evident that we should soon know more of the Esquimaux language than any of them were likely to learn of English, in any reasonable period of time: I was, therefore, far from desiring to receive from Toolooak an answer in the affirmative, when I to-day plainly put the question to him, whether he would go with me to *Kabloona Noona* (European country)? Never was a more decisive negative given than Toolooak gave to this proposal. He eagerly repeated the word, *Na-o* (No), half a dozen times, and then told me that if he went away his father would cry. This simple but irresistible appeal to paternal affection, his decisive manner of making it, and the feelings by which his reply was evidently dictated, were just what could

have been wished. No more could be necessary to convince those who witnessed it that these people may justly lay equal claim, with ourselves, to these common feelings of our nature; and having once satisfied myself of this, I determined never again to excite in Toolooak's mind another disagreeable sensation by talking to him on this subject."—P. 173, 174.

On an early visit to the huts, which was made by Parry, he found only women and children, the men having gone on a sealing excursion; one of the former, named Iligliuk, the mother of the lad Toolooak, favored him with a song, which, he says, gave proofs of her "having a remarkably soft voice, an excellent ear, and a great fondness for singing. We had, on their first visit to the ships, remarked this trait in Iligliuk's disposition when she was listening, for the first time, to the sound of the organ, of which she seemed never to have enough, and almost every day she now began to display some symptom of that superiority of understanding for which she was so remarkably distinguished."

This Esquimaux female was indeed a most extraordinary creature, and one that would have distinguished herself in any society, not merely by her musical cravings, for her whole soul appears to have been music, but more by her untaught intellectual powers. In her exhibition of the former quality, on various occasions, she is chargeable only with one of the two vices which Horace brings against the whole tribe of singers in his day—*omnibus cantoribus*—so far from requiring to be coaxed, she was always most ready to sing; but Parry says, "there was scarcely any stopping her when she had once begun." A party of her countrywomen were one day on board, when, to amuse them, the little band of flutes and violins was struck up, and also some songs, with which they were all delighted. "I feared," Parry says, "that some of them, especially Iligliuk, would have gone into fits with rapture when we introduced into our song some of their names mingled with our own." It was enough, we are told, for this interesting creature just to make the motion of turning the handle of the organ, which, conveying to her mind the idea of music, was always sure to put her immediately into high spirits.

A trait of the superior character and proud feeling of this remarkable female manifested itself at an early period, which, among many others, appears to be quite sufficient to prove that such persons as Iligliuk, her son Toolooak, and John Sackhouse, require but a moderate degree of education to give them a due place in civilized society. Parry says:

"On the 28th of February, Okotook (the husband of Iligliuk), with his wife, came on board, when an occurrence took place, which, as it shows the disposition of the Esquimaux, and especially of one of the most intelligent and interesting among them, I may here relate. Some time before, Ilgliuik, who, from the superior neatness and cleanliness with which she performed her work, was by this time in great request as a seamstress, had promised to cover for me a little model of a canoe, and had in fact sent it to me by the sergeant of marines, though I had not rightly understood from the latter from which of the women it came. Believing that she had failed in her promise, I now taxed her with it, when she immediately defended herself with considerable warmth and seriousness, but without making me comprehend her meaning. Finding that she was wasting her words upon me, she said no more till an hour afterward, when the sergeant accidentally coming into the cabin, she, with the utmost composure, but with a decision of manner peculiar to herself, took hold of his arm to engage his attention, and then looking him steadfastly in the face, accused him of not having faithfully executed her commission to me. The mistake was thus instantly explained, and I thanked Iligliuk for her canoe; but it is impossible for me to describe the quiet, yet proud satisfaction displayed in her countenance at having thus cleared herself from the imputation of a breach of promise."—P. 179, 180.

But the superior intelligence of this extraordinary woman was, perhaps, most apparent in the readiness with which she was made to comprehend the mode of communicating a knowledge of the geographical outline of the sea-coast of the country, and of the islands that were near it. The first attempt of this kind was by placing several sheets of paper before Iligliuk, and drawing roughly on a large scale an outline of the land about Repulse Bay and Lyon Inlet, and continuing it northerly to the present winter station of the ships. The scale being large, it was necessary, when she came to the end of one piece of paper, to tack on another, till at

length she had filled ten or twelve sheets, and had completely lost sight of Winter Island at the other end of the table. Two charts, one made by Iligliuk for Commander Lyon, are given (in the volume) on a reduced scale; and very extraordinary they are, containing, though with much error, a general correct view of the coast, and of its communication with the western coast of the Polar Sea. Parry says:

"Being extremely desirous of obtaining more certain information on this part of the subject, it occurred to me to attempt the thing with Iligliuk on a smaller scale, such as might enable her to keep in view, at the same time, every part of the coast to be delineated. This attempt was also much favored by our having lately obtained the Esquimaux words for the four cardinal points of the horizon, which were, therefore, previously laid down by lines on the chart. Having, in addition to this, delineated the usual portion of the coast, and made Iligliuk 'box the compass' repeatedly, so as to render her quite familiar with the exact relative position of the lands we had laid down, we desired her to complete the rest, and to do it *mikkee* (small), when, with a countenance of the most grave attention and peculiar intelligence, she drew the coast of the continent beyond her own country, as lying nearly north from Winter Island. The most important part still remained, and it would have amused an unconcerned looker-on to have observed the anxiety and suspense depicted on the countenances of *our* part of the group till this was accomplished, for never were the tracings of a pencil watched with more eager solicitude. Our surprise and satisfaction may therefore, in some degree, be imagined when, without taking it from the paper, Iligliuk brought the continental coast short round to the westward, and afterward to the S.S.W., so as to come within three or four days' journey of Repulse Bay. The country thus situated upon the shores of the Western or Polar Sea is called *Akkoolee*, and is inhabited by numerous Esquimaux; and half way between that coast and Repulse Bay Iligliuk drew a lake of considerable size, having small streams running from it to the sea on each side. To this lake her countrymen are annually in the habit of resorting during the summer, and catch there large fish of the salmon kind, while on the banks are found abundance of reindeer. To the westward of Akkoolee, as far as they can see from the hills, which she described as high ones, nothing can be distinguished but one wide-extended sea. Being desirous of seeing whether Iligliuk would interfere with Wager River, as we know it to exist,

I requested her to continue the coast-line to the southward of Akkoolee, when she immediately dropped the pencil, and said she knew no more about it."—P. 197, 198.

Well might Parry consider this new information, thus unexpectedly opened to him, as a satisfactory prospect of his soon rounding the northeastern point of America, which, in point of fact, he subsequently discovered to be *as*, and *where*, represented by this intelligent woman. To her alone, therefore, is the merit due of the discovery of the extreme northern boundary of America, or, which is the same thing, the northeastern extremity of that continent, which Captain Parry is told, in his instructions, to be the object next to the finding a passage from the Atlantic to the Pacific. It is true that he might, in his progress along the coast on which he was about to proceed, have made the discovery, but the confidence he placed in the indication he had acquired from the Esquimaux lady was sufficient to induce a more than common attention to the spot where it received full confirmation.

Nor were the powers of mind in this superior woman confined to the love of music, or drawing, or needle-work; every thing she observed the people of the ships to be employed upon caught her attention. One day, accompanied by her husband and son, they paid a visit to the ships, and the season for departure approaching, being desirous, says Parry, of entertaining them well, after providing abundance to eat, we showed them every thing about the ship that we thought likely to amuse them :

"Of all the wonders they had ever witnessed on board, there was nothing that seemed to impress them so strongly with a sense of our superiority as the forge, and the work which the armorer performed with it. The welding of two pieces of iron especially excited their admiration, and I never saw Iligliuk express so much astonishment at any thing before. Even in this her superior good sense was observable, for it was evident that the utility of what she saw going on was what forced itself upon her mind; and she watched every stroke of the hammer, and each blast of the bellows, with extreme eagerness, while numbers of other Esquimaux looked stupidly on, without expressing the smallest curiosity or interest in the operation, except by desiring to have some spear heads fashioned out by this means."—P. 210.

Her attention to her husband, who was taken ill, was

very striking. Having, together with him, been three hours on a sledge, Mr. Bushnan, who was of the party, told Parry that Iligliuk had scarcely taken her eyes off her husband's face the whole time, and seemed almost worn out with fatigue and anxiety. Her husband took a dose of physic for the first time in his life, and not without great dread; "before he put the cup to his lips with one hand, he held on by his wife with the other, and she by him with both hers, as though they expected an explosion. Iligliuk had one side of her hair loose, and now loosened the other also, fancying Okotook to be worse; for even in this sequestered corner of the globe disheveled locks bespeak mourning." Hers, however, Parry says, was not the mere semblance of grief, for she was really much distressed throughout the day.

It is pleasing to dwell on these amiable traits of character in one whom the world at large would set down, being an Esquimaux, as little, if it all, removed from the ordinary race of savages; and it is only from such a man as Parry and his associates that her virtues, and her unaccountable strength and clearness of understanding, could have been brought out and duly appreciated. Would that, by making publicly known to the world this despised and persecuted race (for nothing short of persecution could have driven them to take up their abode in these extreme parts of the globe, amid ice and snow, where worse than Cimmerian darkness dwells for half the year)—would that they might be looked upon more generally than they are as rational beings, and treated accordingly. Theirs, it must be confessed, is a most cruel and wretched lot, for whom any permanent relief appears to be hopeless, surrounded as they are in every part of the coast-land bounding the dreary Polar Sea—in Asia, Europe, and America—and driven as they are into by-creeks and corners, or what is still worse, by the savage Indians of the northern parts of America, to the very shores of that sea—the *Ultima Thule* of all civilization—what hope, then, is there that any change or any exertion of humane and well-disposed communities can afford them relief from a state of perpetual oppression, misery, and starvation?

At the same time that Parry dwells with pleasure on

the virtues and the superior understanding of Iligliuk, he is not blind to her failings, the chief of which appears to be vanity (to which he has himself not a little contributed), selfishness, and ingratitude. "I am compelled to acknowledge," he says, "that in proportion as the superior understanding of this extraordinary woman became more and more developed, her head (for what female head is indifferent to praise?) began to be turned with the general attention and numberless presents she received." She refused, it seems, on the eve of parting, Commander Lyon's request to her to make for him a few little models of their clothing; "which," Parry observes, "shows in a strong light that deep-rooted selfishness that, in numberless instances, detracted from the amiability of her disposition."

It is not quite clear, from what occurred on the day that Okotook and Iligliuk came on board to pay their last visit, that Parry did not unintentionally offend the pride of the latter. He says: "As these good folks found themselves perfectly at home in my cabin, I was usually in the habit of continuing my occupations when they were there without being disturbed by them. Being now engaged in writing, my attention was unexpectedly directed toward them by Iligliuk's suddenly starting from her seat, moving quickly toward the door, and, without saying a word either to me or any of the officers present, hastening directly on deck. Okotook, indeed, as he followed her out of the cabin, turned round and said 'Goodby;' and, without giving us time to return the compliment, they both hurried out of the ship, leaving us in some astonishment at this singular leave-taking." It is not unnatural to suppose that, after so long and friendly an intercourse, they should, on this particular visit, feel themselves somewhat neglected; it could hardly be expected that they should not feel, on such an occasion, an apparent indifference so contrary to the uniform attention and kindness they had received. But Parry found a change had taken place in Iligliuk's conduct, and explains the causes which gave rise to it.

"I am, however, compelled to acknowledge that the superior decency and even modesty of her behavior had combined, with her intellectual qualities, to raise her in our esti-

mation far above her companions; and I often heard others express, what I could not but agree in, that for Iligliuk alone, of all the Esquimaux women, that kind of respect would be entertained which modesty in a female never fails to command in our sex. Thus regarded, she had always been freely admitted into the ships, the quarter-masters at the gangway never thinking of refusing entrance to the 'wise woman,' as they called her. Whenever any explanation was necessary between the Esquimaux and us, Iligliuk was sent for, quite as an interpreter; information was chiefly obtained through her, and she thus found herself rising into a degree of consequence to which, but for us, she could never have attained. It may not, therefore, be wondered at if she became giddy with her exaltation, assuming airs which, though infinitely diversified in their operation, according to circumstances, perhaps universally attend a too sudden accession of good fortune in every child of Adam from the Equator to the Poles. The consequence was, Iligliuk was soon spoiled; considered her admission into the ships, and most of the cabins, no longer as an indulgence, but a right; ceased to return the slightest acknowledgment for any kindness or presents; became listless and inattentive in unraveling the meaning of our questions, and careless whether her answers conveyed the information we desired. In short, Iligliuk in February and Iligliuk in April were confessedly very different persons; and it was at last amusing to recollect, though not very easy to persuade one's self, that the woman who now sat demurely in a chair, so confidently expecting the notice of those around her, and she who had at first, with eager and wild delight, assisted in cutting snow for the building of a hut, and with the hope of obtaining a single needle, were actually one and the same individual."—P. 219, 220.

Iligliuk was unquestionably altered and spoiled, and to Captain Parry and his associates was owing the metamorphosis; but it was a natural consequence, and could not be otherwise; nor does the change in her conduct detract in any degree from that quiet, orderly, and cheerful behavior which prevailed almost universally among the tribe to which she belonged.

Of the peculiar habits, the disposition, the general character, the resources and employments, and the state of society among these poor creatures, doomed to consume their lives in this country, the most dreary and dismal, perhaps, in the whole world, Parry has given a full account in his concluding chapter. Here, however, the

occurrences only will be mentioned. As a general one, it may be stated that, during the months of March, April, and May, when they depend mostly on the capture of the seal and the walrus, which is attended with the greatest difficulty and watchfulness on the ice, the whole tribe may be said to be literally in a state of starvation. Had they not, indeed, on many occasions, been supplied from the ships, numbers of them must undoubtedly have perished of hunger. All the bread-dust was collected and preserved for their use; yet, in the height of their distress, they appeared never to be deprived of that happy and cheerful temper of mind, and that good humor which they naturally possessed, and preserved, even when severely pinched by hunger and cold, and wholly deprived, for days together, of food, and light, and fuel, privations to which they were constantly liable. But no calamity of this kind, frequently as it occurs, has taught them to be provident. They live but from day to day: with them it is always a feast or a famine; they will eat at any period of the day when victuals are to be had, from five to eight pounds of animal food. From May to October, when the migratory animals have arrived from the southward—the musk-ox, the reindeer, the hares, the swans, and various other fowls and quadrupeds—they are able to procure a good supply of food; and those few who add frugality to their industry, contrive to pound the flesh with the fat of the animal, and make a little of what they call *pemmican*, for preservation—a compound well known to our Arctic voyagers. In the early part of April, some of the tribe that frequented the Winter Island began to migrate from the seashore to the westward in quest of food; and the change of scene in their once happy village, and more especially in their clean and comfortable snow huts while new, is thus described:

"On going out to the village, we found one half of the people had quitted their late habitations, taking with them every article of their property, and had gone over the ice, we knew not where, in quest of more abundant food. The wretched appearance which the interior of the huts now presented baffles all description. In each of the larger ones some of the apartments were either wholly or in part deserted, the very snow which composed the beds and fireplaces

having been turned up, that no article might be left behind. Even the bare walls, whose original color was scarcely perceptible for lampblack, blood, and other filth, were not left perfect, large holes having been made in the sides and roofs for the convenience of handing out the goods and chattels. The sight of a deserted habitation is at all times calculated to excite in the mind a sensation of dreariness and desolation, especially when we have lately seen it filled with cheerful inhabitants; but the feeling is even heightened rather than diminished when a small portion of these inhabitants remain behind to endure the wretchedness which such a scene exhibits. This was now the case at the village, where, though the remaining tenants of each hut had combined to occupy one of the apartments, a great part of the bed-places were still bare, and the wind and drift blowing in through the holes which they had not yet taken the trouble to stop up. The old man Hikkeiera and his wife occupied a hut by themselves, without any lamp or a single ounce of meat belonging to them; while three small skins, on which the former was lying, were all that they possessed in the way of blankets. Upon the whole, I never beheld a more miserable spectacle, and it seemed a charity to hope that a violent and constant cough with which the old man was afflicted would speedily combine with his age and infirmities to release him from his present sufferings. Yet in the midst of all this he was even cheerful, nor was there a gloomy countenance to be seen at the village."—P. 201, 203.

There is something very extraordinary, as it would appear, in the physical constitution of these people. At this moment, when in want of every kind of subsistence, and kept alive by the distribution of bread-dust, on a hint from the commander that he wished the females to let him witness some of their games, the proposal was scarcely made before every female that was left in the village, not excepting even the oldest of them, joined in the performance of singing and in never-ceasing merriment and laughter. "Neither the want of food and fuel, nor the uncertain prospect of obtaining any that night, were sufficient to deprive these poor creatures of that cheerfulness and good humor which it seems at all times their peculiar happiness to enjoy." Their hilarity was not disturbed this night, for positive intelligence arrived from the ice that two walruses had been taken. "If," says Parry, "the women were only cheerful before, they were now absolutely frantic."

The end of May having arrived, and the Esquimaux being ready to depart to the northward, the commander made them what they considered a most valuable present, which produced in the women such immoderate fits of laughter as to amount almost to hysterics, which were succeeded by a flood of tears. The men seemed thankful, though less noisy in their acknowledgments. "On taking their departure," says Parry, "these good-humored and ever-cheerful people greeted us with three cheers in the true Kabloona (English) style."

Little deserving of notice occurred till the middle of June, when the expedition also was preparing to depart to the northward, by cutting out the ships from the ice, taking down the tents and the observatory, and embarking the instruments; but, before leaving Winter Island, after a residence of nine months, Commander Parry states, "It becomes my painful duty to turn from these busy occupations, where animation, cheerfulness, and hope prevailed, to the sad and solemn scenes of sickness and of death, for with both of these did it please the Almighty to visit us at this period." Two seamen, Souter and Reid, in Parry's ship, died; and one, Pringle, in Lyon's. They were buried in the same grave; the former with a handsome tomb of stone and mortar over it, and a slab of the same kind, with a suitable inscription, over the latter.

It was not till the 2d of July that the ships were moved out of their winter's dock, and they put to sea on the 8th with no very favorable auspices of what was to befall them in their progress to the northward, along the eastern coast of North America. The dangers that threatened them at starting will be seen from Commander Lyon's report:

"The flood tide coming down loaded with a more than ordinary quantity of ice, pressed the ship very much between six and seven A.M., and rendered it necessary to run out the stream cable, in addition to the hawsers which were fast to the land ice. This was scarcely accomplished when a very heavy and extensive floe took the ship on her broadside, and, being backed by another large body of ice, gradually lifted her stern as if by the action of a wedge. The weight, every moment increasing, obliged us to veer on the hawsers, whose friction was so great as nearly to cut through the bitt-heads,

and ultimately set them on fire, so that it became requisite for people to attend with buckets of water. The pressure was at length too powerful for resistance, and the stream cable, with two six and one five inch hawsers, went at the same moment. Three others soon followed. The sea was too full of ice to allow the ship to drive, and the only way by which she could yield to the enormous weight which oppressed her was by leaning over the land-ice, while her stern, at the same time, was entirely lifted more than five feet out of the water. The lower deck beams now complained very much, and the whole frame of the ship underwent a trial which would have proved fatal to any less strengthened vessel. At this moment the rudder was unhung with a sudden jerk, which broke up the rudder case and struck the driver boom with great force. In this state I made known our situation by telegraph, as I clearly saw that, in the event of another floe backing the one which lifted us, the ship must inevitably turn over, or part in midships. The pressure which had been so dangerous at length proved our friend, for by its increasing weight the floe on which we were borne burst upward, unable to resist its force. The ship righted, and, a small slack opening in the water, drove several miles to the southward before she could be again secured to get the rudder hung; circumstances much to be regretted at the moment, as our people had been employed with but little intermission for three days and nights, attending to the safety of the ship in this dangerous tideway."—P. 258.

The Fury had almost as narrow an escape as the Hecla. The next day the Fury for an hour or two was continually grazed, and sometimes heeled over, by a degree of pressure which, under other circumstances, would not have been a moderate one.

"A little before noon, a heavy floe, some miles in length, being probably a part of that lately detached from the shore, came driving down fast toward us, giving us serious reason to apprehend some more fatal catastrophe than any we had yet encountered. In a few minutes it came in contact, at the rate of a mile and a half an hour, with a point of the land-ice left the preceding night by its own separation, breaking it up with a tremendous crash, and forcing numberless immense masses, perhaps many tons in weight, to the height of fifty or sixty feet, from whence they again rolled down on the inner or land side, and were quickly succeeded by a fresh supply. While we were obliged to be quiet spectators of this grand but terrific sight, being within five or six hundred yards of

the point, the danger to ourselves was twofold; first, lest the floe should now swing in, and serve us much in the same manner; and, secondly, lest its pressure should detach the land-ice to which we were secured, and thus set us adrift to the mercy of the tides. Happily, however, neither of these occurred, the floe remaining stationary for the rest of the tide, and setting off with the ebb which made soon after."—P. 260.

In addition to the danger which threatened to crush and overwhelm the ships among these tremendous masses of ice thus thrown into violent commotion, was the chance of being beset in the midst of the floes, and in that helpless state swept away with the flood tide and current to the southward, and drifted back again to Southampton Island, as had happened to them before, and thus again would the labor of weeks be inevitably lost. By the 12th of July, however, after long and unremitting perseverance, and by taking advantage of every opening and breeze of wind to move the ships to the northward, they had reached the latitude of 67° 18′, opposite to a considerable opening in the land, out of which a strong current was observed to set into the sea. It had not the least appearance of a passage; but as it offered a security against any ice coming in, Parry determined to anchor as near it as possible, and to examine what he justly supposed to be a fresh-water river; and a fresh-water river, as may be supposed, was too great a luxury, as well as novelty, in a region of ice and snow, to be slightly passed over. The boats of both ships were therefore employed in landing parties to partake of this oasis in the desert.

"Landing on the south shore and hauling the boats up above high-water mark, we rambled up the banks of the stream, which are low next the water, but rise almost immediately to the height of about two hundred feet. As we proceeded we gradually heard the noise of a fall of water; and being presently obliged to strike more inland, as the bank became more precipitous, soon obtained a fresh view of the stream, running on a much higher level than before, and dashing with great impetuosity down two small cataracts. Just below this, however, where the river turns almost at a right angle, we perceived a much greater spray, as well as a louder sound; and having walked a short dis-

tance down the bank, suddenly came upon the principal fall, of whose magnificence I am at a loss to give any adequate description. At the head of the fall, or where it commences its principal descent, the river is contracted to about one hundred and fifty feet in breadth, the channel being hollowed out through a solid rock of gneiss. After falling about fifteen feet, at an angle of 30° with a vertical line, the width of the stream is still narrowed to about forty yards, and then, as if mustering its whole force previous to its final descent, is precipitated in one vast continuous sheet of water almost perpendicularly for ninety feet more. So nearly, indeed, is the rock perpendicular, that we were enabled to let down a sounding lead and line for the purpose of measuring its actual height, while a man descended from crag to crag with a second line attached to him, to see when the lead touched the water below. The dashing of the water from such a height produced the usual accompaniment of a cloud of spray, broad columns of which were constantly forced up, like the successive rushes of smoke from a vast furnace, and on this, near the top, a vivid *iris* or rainbow was occasionally formed by the bright rays of an unclouded sun. 'The roaring of the mountain-cataract,' which constitutes a principal feature of the sublime in scenery of this magnificent nature, was here almost deafening; and as we were able to approach the head of the fall even so close as a single yard, the very rock seemed to suffer a concussion under our feet. The basin that receives the water at the foot of the fall is nearly of a circular form, and about four hundred yards in diameter, being rather wider than the river immediately below it. The fall is about three quarters of a mile above our landing-place, or two miles and a quarter from the entrance of the river. After remaining nearly an hour, fixed, as it were, to the spot by the novelty and magnificence of the scene before us, we continued our walk upward along the banks, and, after passing the two smaller cataracts, found the river again increased in width to above two hundred yards, winding in the most romantic manner imaginable among the hills, and preserving a smooth and unruffled surface for a distance of three or four miles that we traced it to the southwest above the fall. What added extremely to the beauty of this picturesque river, which Commander Lyon and myself named after our mutual friend, Mr. Barrow, secretary to the Admiralty, was the richness of the vegetation on its banks, the enlivening brilliancy of a cloudless sky, and the animation given to the scene by several reindeer that were grazing beside the stream."—P. 264, 265.

Returning on board, they found a strong southerly breeze to have driven the ice off from the shore, affording an open channel between the ice and the land of not less than nine miles in width. Up this they proceeded, and passed several headlands, to each of which they gave a name. Such was the advantage of a fair wind and open water, that, as Parry says, "we had been favored with an unobstructed run of fifty miles: an event of no trifling importance in this tedious and uncertain navigation." The great increase in the number of sea-horses confirmed the navigators in the belief that they were now approaching Amitioke, the country of Iligliuk, in the neighborhood of which she and her companions had frequently represented them as abundant. As they proceeded, these walruses became more and more numerous every hour, lying in large herds upon the loose pieces of drift-ice, huddled close to and lying upon each other, in separate droves of from twelve to thirty, the whole number near the boats being probably about two hundred.

On the 16th a great deal of high land was brought in sight to the northward and eastward, which, on the first inspection of the Esquimaux charts, was decided to be that large portion between which and the continent lay the promised strait, that was to lead the ships to the westward into the Polar Sea. So far all was satisfactory; "but, after sailing a few miles farther, it is impossible to describe our disappointment and mortification on perceiving an unbroken sheet of ice extending completely across the supposed passage, from one land to the other." Here they were joined by several Esquimaux, but none of their old friends, who had not yet arrived at any of their stations. They obtained from the new ones, however, one very interesting piece of information, namely, that it was Igloolik on which they were now about to land, and which they knew from their Winter-Island friends, Iligliuk in particular, was near to the strait that was to conduct them into the Polar Sea. In this neighborhood were numerous Esquimaux of the same friendly and cheerful character as those of Winter Island, but apparently somewhat less intellectual. Parry now, however, had but one great object at heart, which was to at-

tempt the navigation of the strait. The ships made several ineffectual endeavors; but the whole entrance, up to the narrowest part, was so blocked up with old ice not likely to remove, and the middle of August having arrived, he determined at least to satisfy his mind as to its communication with the Polar Sea.

It will readily be believed that "every hour's delay added an indescribable weight to his anxiety;" and "stopped," he says, "as we had now been, at the very threshold of the Northwest Passage for nearly four weeks, without advancing twice as many miles to the westward, suspense at such a crisis was scarcely the less painful because we knew it to be inevitable." He therefore determined on attempting a journey to the westward, endeavoring first to reach some of the islands lying in that direction, and by passing from one to the other, at length to gain the main land, from whence it might not, perhaps, be difficult to travel to the strait itself, and "thus to end every doubt as well as every conjecture respecting it."

Accordingly, on the 14th of August he set out, on the 17th crossed the Bouverie Islands, and on the following day arrived at a peninsula, which he examined, and proceeded to its extreme northern point, which was found to overlook the narrowest part of the desired strait, of which he gives the following brief account:

"The strait lay immediately below us, in about an east and west direction, being two miles in width, apparently very deep, and with a tide or current of at least two knots, setting the loose ice through to the eastward. Beyond us, to the west, the shores again separated to the distance of several leagues, and for more than three points of the compass in that direction no land could be seen to the utmost limits of a clear horizon, except one island six or seven miles distant. Over this we could entertain no doubt of having discovered the Polar Sea; and, loaded as it was with ice, we already felt as if we were on the point of forcing our way through it along the northern shores of America.

"After dispatching one of our party to the foot of the point for some of the sea water, which was found extremely salt to the taste, we hailed the interesting event of the morning by three hearty cheers, and by a small extra allowance of grog to our people, to drink a safe and speedy passage through the channel just discovered, which I ventured to name, by antic

pation, *the Strait of the Fury and Hecla.* Having built a pile of stones on the promontory, which, from its situation with respect to the continent of America, I called *Cape Northeast,* we walked back to our tent and luggage, these having, for the sake of greater expedition, been left two miles behind, and, after resting a few hours, set out at 3 P.M. on our return."—P. 312.

This little journey proved satisfactory as far as it went; it gave to Parry a personal view of the strait, and satisfied him that its water was that of the sea. But as the northeast point from which he saw it forms the eastern entrance only from the south side of the strait, and he deemed it expedient that something more of it should be known, he took measures accordingly. In the course of a week following, a light northeasterly breeze allowed the ships to be steered under all possible sail up the strait. By keeping on the south or continental shore, and passing along by Cape Northeast within two or three hundred yards of the rocks, they succeeded, with the assistance of the boats ahead, in getting through the narrow channel. The length of this narrowest part of the strait is said to extend about three miles in the direction of west by north: it is here two miles across, and keeps its width the whole way through this narrow part. Two considerable islands almost shut up the said part, named by Parry Ormond and Liddon Islands; the southern point on the former of which, being directly opposite to Cape Northeast, forms the northern point of the narrow entrance, to which Parry assigned the name of Cape Ossory. The ships, however, were soon stopped by apparently permanent ice clinging to the shores of the above-mentioned islands and of the continent; "and thus," says Parry, "after a vexatious delay of six weeks at the eastern entrance of the strait, and at a time when we had every reason to hope that Nature, though hitherto tardy in her annual disruption of the ice, had at length made an effort to complete it, did we find our progress once more opposed by a barrier of the same continuous, impenetrable, and hopeless nature as at first."

Hopeless as it was that much more could be done, as concerned the movements of the expedition, now that the month of August was just expiring, Parry very properly determined that all doubts should be satisfied, as

well as that every information should be gained, as to the length of the strait, and the extent of the fixed ice therein. For this purpose, three exploring parties were sent out in different directions; that for deciding the point in question consisted of Mr. Bushnan with three men, under the orders of Lieutenant Reid, who was instructed to proceed along the northern coast of the strait to the westward, to gain as much information as possible respecting the termination of the strait, and to return to the ships in four days. By his report it appears that, by an observation on the second day of his journey, the latitude he reached was 70° 00′ 05″, and that from this point he could perceive that the opposite or main-land (that is, the south shore of the strait) gradually trended to the southward, leaving a broad entrance into the western sea. He says: "The weather being clear, afforded us an extensive prospect to the westward, and we could now perceive that a bluff near the north shore, which had before appeared insular, formed, in reality, the northern point of the entrance, and I named it *Cape Hallowell*, out of respect to Vice-admiral Sir Benjamin Hallowell." To a fine bay on the Cockburn-Island shore (the north) he gave the name of Autridge, and to an inlet in the same land that of White; and he concludes this part of his report by saying that "the opening of the strait into the Polar Sea was now so decided, that I considered the principal object of my journey accomplished." It would have been more satisfactory if Mr. Reid had been a little more circumstantial in his observation on the two western points of the strait; that which is named Englefield on the chart, but by whose authority does not appear, is not mentioned as a cape, gradually trending to the southward, and leaving a broad entrance into the Western Sea. It may hardly be necessary to observe that a point of land seen obliquely from a distance of twenty or thirty miles must be very unsatisfactorily laid down on paper. The width between the two shores opening into the sea appears to be about six or seven miles, which, compared with its length of sixty miles, can scarcely be called a "magnificent passage." Its capacity, however, notwithstanding the obstructing islands, may be amply sufficient to admit a passage into the Po-

lar Sea for ships of a moderate size, though it is pretty certain that no ship will ever attempt it, not merely on account of the ice with which it appears to be permanently blocked up, but also of the perpetual current setting down it, occasioning such a tumultuous swell and disturbance among the ice as must render it still more dangerous for ships to anchor in any part near the eastern mouth of the strait.

The 24th of September having now arrived, Parry considered it no longer safe to venture the ships to remain in this sea, their situation being one of almost constant and unavoidable danger. He determined, therefore, to run over to Igloolik in search of winter quarters, which was accomplished, though not without imminent danger to both ships. The situation was not very favorable for passing the winter in, but, by cutting a canal in the ice as usual, they were placed in security. The whole length of this canal was 4343 feet; the thickness of the ice in the level and regular parts from 12 to 14 inches, but in many places where a separation had occurred it amounted to several feet. "I can not," says Parry, "sufficiently do justice to the cheerful alacrity with which the men continued this laborious work during thirteen days, the thermometer being frequently at *zero*, and once as low as —9° in that interval.

Being now established in winter quarters for the second time in the present voyage, Parry's thoughts were naturally employed in considering what farther steps should be pursued, and what expedient he should have recourse to on their liberation from the ice some ten or eleven months hence. His resolute and enterprising character was not likely to be satisfied with the little progress that had been made in the discovery of a northwest passage, which was the main object of the voyage. The measure he contemplated appears to have been a bold one, and one which, situated as the ships were, could not possibly have been attended with any advantage to that object, and would, to a certainty, have been productive of fatal results to himself and the whole crew; but let him speak for himself:

"Flattering as our prospects appeared at the commencement of the past summer, our efforts had certainly not been

attended with a proportionate degree of success, and little satisfaction remained to us at the close of the season but the consciousness of having left no means within our reach untried that could in any way promote our object. It required, indeed, but a single glance at the chart to perceive that whatever the last summer's navigation had added to our geographical knowledge of the eastern coast of America and its adjacent lands, very little had in reality been effected in furtherance of the Northwest Passage. Even the actual discovery of the desired opening into the Polar Sea had been of no practical benefit in the prosecution of our enterprise; for we had only discovered this channel to find it impassable, and to see the barriers of nature impenetrably closed against us, to the utmost limit of the navigable season.

"Viewing the matter in this light, it appeared to resolve itself into the single question, by what means the resources of the expedition could possibly be extended beyond the period to which they were at present calculated to last, namely, the close of the year 1824. Only one expedient suggested itself by which that object could be attained, and this I determined to adopt, should no unforeseen occurrence arise to prevent it. It was, to send the Hecla to England in the following season, taking from her a twelvemonth's provisions and fuel to complete the Fury's resources to the end of the year 1825, and then continuing our efforts in that ship singly as long as a reasonable hope remained of our ultimate success. One or two collateral advantages occurred to me as likely to be derived from this plan, the first of which was the opportunity thus afforded of transmitting to the Lords Commissioners of the Admiralty a full account of our past proceedings and present situation and intentions, whereby, perhaps, much needless anxiety on our account might be prevented. It would also, as I hoped, allow their lordships the option of making any alteration which they might now deem requisite in the arrangements pointed out in my instructions respecting the ship to be sent to meet us near Behring's Strait, for which the orders might not, perhaps, leave England before the arrival of the Hecla there in the autumn of 1823. These were, however, minor and less important considerations; my principal object and determination being to persevere, to the utmost extent of our resources, in the prosecution of the enterprise with which I had the honor to be charged. Having suggested this expedient to Captain Lyon, I had much satisfaction in finding his opinion entirely coincide with my own, and without at present mentioning it to the other individuals belonging to the expedition, we continued to consult together from time to time during the winter concerning the arrange-

ments it would be requisite to make for commencing the execution of our plan in the course of the following spring."—P. 372–374.

One of the first operations was to build a wall of snow twelve feet high round the Fury, and at the distance of twenty yards from her, "forming a large square, like that of a farm-yard," by which not only was the snow-drift kept out, but a good sheltered walk was afforded against every wind. The Fury and the Hecla were separated on account of the large hommocs of ice.

"The distance between the two ships, though not such as to prevent constant intercourse, was nevertheless too great to allow of our continuing the theatrical entertainments, by which our former winters had been considerably enlivened. This was, however, the less requisite, and, indeed, entirely unnecessary, on account of our neighborhood to the Esquimaux, whose daily visits to the ships throughout the winter afforded both to officers and men a fund of constant variety and never-failing amusement, which no resources of our own could possibly have furnished. Our people were, however, too well aware of the advantage they derived from the schools not to be desirous of their re-establishment, which accordingly took place soon after our arrival at Igloolik, and they were glad to continue this as their evening occupation during the six succeeding months."—P. 377–378.

In the mention of the Esquimaux, some of whom, it appears, had come from Amitioke, and among whom were many of the old acquaintances of Winter Island, it might have been expected that Iligliuk would have been among the first and foremost; but, strange as it may appear, the name even of this extraordinary person, from whom so much valuable and correct information had been received, is only once mentioned, and then rather reproachfully, as a name in the general account of these people; an account that extends to at least a hundred pages, descriptive of their character, manners, and customs, and detailing the various transactions that took place during the confinement of the ships. Among the visitors from Amitioke was that distinguished youth Toolooak, the son of Iligliuk, who is repeatedly mentioned and commended. "I counted to-day," says Parry, "on a girdle worn round the waist by Toolooak's mother, twenty-nine deer's ears, procured by this young man's

own exertions: a girdle which she constantly wears, as a proud trophy of her son's exploits; and," he adds, "there are few mothers, indeed, who might not be proud of such a son as Toolooak, who, on longer acquaintance, quite maintained his former character, of possessing many excellent qualities both of head and heart." Poor Iligliuk! a name appearing to be no longer remembered but as Toolooak's mother; but Parry no doubt meant to say that Toolooak wore the girdle, "which was worn (*usually*) round the waist of his mother." But enough for the present of the Esquimaux.

The appearance of scurvy in some slight but unequivocal symptoms could scarcely be a subject of wonder, considering the length of time the ships' crews had no other dependence than upon their own resources, unassisted as they had been by any supply of *fresh* antiscorbutic plants or other vegetables, a case unparalleled in the annals of navigation. The month of August had commenced, when, as Parry observes, "incredible as it may appear, the ships were as securely confined in the ice as in the middle of winter, except that a pool of water about twice their own length in diameter was now open around them. I determined, therefore," he adds, "notwithstanding the apparent hopelessness of sawing our way through four or five miles of ice, to begin that laborious process." By the 6th of August about four hundred yards of ice were sawn through and floated out, leaving now a broad canal eleven hundred yards in length. Through this, and by the disruption of the floe, the Fury was liberated and floated into open water on the 8th of August, and on the 12th was followed by the Hecla. Parry, now that the ships were once more afloat, began to reflect on what he had proposed to do on the return of summer.

"When the lateness of the season to which the ships had now been detained in the ice is considered, with reference to the probability of the Fury's effecting any thing of importance during the short remainder of the present summer, it will not be wondered at that, coupling this consideration with that of the health of my officers and men, I began to entertain doubts whether it would still be prudent to adopt the intended meas-

ure of remaining out in the Fury as a single ship; whether, in short, under existing circumstances, the probable evil did not far outweigh the possible good. In order to assist my own judgment on this occasion upon one of the most material points, I requested the medical officers of the Fury to furnish me with their opinions as to the probable effect that a third winter passed in these regions would produce on the health of the officers, seamen, and marines of that ship, taking into consideration every circumstance connected with our situation."—P. 470.

The reply of Mr. Edwards, the surgeon, was, as might be expected, decisive. Under any circumstances, he stated that an increase of general debility, with a corresponding degree of sickness, might be expected; but, considering the matter as in a single ship, it assumes a much more important shape. In that view, the increase of labor and exposure, from the separation of the vessels, the privation of many salutary occupations, mental and corporeal, attending their union, and, at this late period of the season, the hopelessness of the success of the ensuing navigation, would be such as to excite feelings sufficiently lively to counteract those depressing causes. The substance of the answer being sent to Commander Lyon, after noticing the great change he had observed in the constitution of the officers and men of the Hecla from the continuance of one particular diet, almost total deprivation of fresh animal and vegetable food for above two years, and the necessary and close confinement for several months of each severe winter, "I conceive," he says, "that a continued exposure to the same deprivations and confinements, the solitude of a single ship, and the painful monotony of a third winter to men whose health is precarious, would in all probability be attended with very serious consequences."

But he goes farther, and notices the inutility of the measure. From the circumstance of being detained in the ice until the present time, the 10th of August, "I am of opinion," he says, "that the season in which it is possible to navigate has now so far passed that nothing material can be effected either by one or both ships. We know, from the experience of last year, that it is not before the end of August or the beginning of September that the ice breaks up in the Strait of the Fury

and Hecla, and that it is not until that period that you will be enabled to re-examine its western entrance." And he wisely concludes by advising that the Fury and Hecla return to England together, which Parry as wisely accepts. "Under such circumstances," he says, "I no longer considered it prudent or justifiable, upon the slender chance of eventual success now before us, to risk the safety of the officers and men committed to my charge, and whom it was now my first wish to reconduct in good health to their country and their friends."

Having come to this decision, and having extricated the ships from their confinement, on the 12th of August they stood out to the eastward, and finally took their departure from Igloolik. The current rapidly hurried them to the southward, their drift being twenty-one miles in twenty-four hours, though closely beset, and without a single pool of water in sight the whole time. At one place the ships were whirled round a headland at the rate of two or three knots an hour. After passing the Barrow River, they were drifted out nine or ten miles from the land, the influence of this river having probably thus set them out. On the 30th they were close to Winter Island.

"Thus had we," says Parry, "in a most singular manner, once more arrived at our old winter quarters, with scarcely a single successful exertion on our parts toward effecting that object. The distance from Ooglit to our present station was about one hundred and sixty miles along the coast. Of this we had never *sailed* above forty, the rest of the distance having been accomplished, while we were immovably beset, by mere drifting. The interval thus employed having been barely eight days, gives an average drift to the southward of above fifteen miles per day."—P. 478.

Being set fast in the ice in proceeding to the southward, a strong westerly breeze on the 17th of September allowed them to shape their course for the Trinity Islands in a perfectly open sea. From hence they ran down Hudson's Strait without meeting with any obstruction, and on the 10th of October entered the harbor of Bressay Sound in Lerwick, where they enjoyed the "first trace of civilized man that they had seen for

seven-and-twenty months." The kindness which they received from these poor but hospitable people is thus feelingly described:

"I feel it utterly impossible adequately to express the kindness and attention we received for the three or four days that we were detained in Bressay Sound by a continuance of unfavorable winds. On the first information of our arrival the bells of Lerwick were set ringing, the inhabitants flocked from every part of the country to express their joy at our unexpected return, and the town was at night illuminated, as if each individual had a brother or a son among us. On the 12th, being Sunday, the officers and men of both ships attended divine service on shore, when the worthy minister, the Reverend Mr. Menzies, who was before well known to many among us, offered up, in the most solemn and impressive manner, a thanksgiving for our safe return, at the same time calling upon us, with great earnestness, never to forget what we owed to Him who had been 'about our path and about our bed, and who spieth out all our ways.' The peculiarity of the circumstances under which we had joined the congregation, the warmth of feeling exhibited by every person assembled within the sacred walls, together with the affectionate energy of the preacher, combined to produce an effect of which words can convey but little idea, but which will not easily be effaced from the minds of those who were present on this affecting occasion."—P. 486.

On the 18th Captain Parry arrived at the Admiralty, and the ships were paid off on the 16th of November.

On looking back at the horrible navigation from the entrance of Hudson's Strait to Winter Island, through Middleton's Frozen Strait, along the coast of the land which separates Prince Regent's Inlet from Fox's Channel, and the same villanous kind of navigation along the same coast from Winter Island to Igloolik, near the mouth of the Fury and Hecla Strait, there does not appear to be the slightest encouragement ever to send another ship to that quarter, even had the navigation of that strait been always open, safe, and convenient, for in that case it could not afford any advantage. It opens into a strait, among islands of the Polar Sea, called Prince Regent's Inlet, of the lower part of which nothing was at this time known beyond Iligliuk's information (correct in all other parts), that it terminates at Akkoolee, nearly opposite to Repulse Bay. But, had it ex-

tended to the coast of America, the islands in that corner are so clustered and crowded together as to admit of no probability of a navigable passage there for large ships to the westward, and no man in his senses would take that line of route to get into Lancaster Sound when he could go there direct in half the time, and without any of the danger which Fox's Channel and the Fury and Hecla Strait would occasion.

Toward the conclusion of his narrative, Captain Parry repeats his opinion of the advantages of *continuous land* in the navigation of the Polar Seas, and that the principle of coasting the northern shore of America must still be carefully kept in view; and he adds, "there is no *known* opening which seems to present itself so favorably for this purpose as Prince Regent's Inlet." This opinion, thus publicly given, is obviously an indication of the expedition which succeeded this, and which may possibly have made some change in Captain Parry's sentiments on this head. Ample proof has since been given by the reports of Franklin, Richardson, Back, and subsequently by Simpson, that the coast of North America, which is the southern shore of the Polar Sea, is navigable throughout but by canoes or boats only, and that large ships could not attempt it unless at a very considerable distance from the shore on the sea, and outside the numerous chains of small islands that, on the eastern portion in particular, run parallel to the coast.

CHAPTER VII.

CAPTAIN GEORGE F. LYON.

1824.

Narrative of a Voyage to Wager River, or Repulse Bay, in his Majesty's ship Griper, and thence to the Polar Coast of North America over land.

THE Griper was commanded, officered, and manned as under:

George F. Lyon, Captain.
Peter Manico, } Lieutenants.
Francis Harding, }
Mr. Kendal, Assistant Surveyor.
Thomas Evans, Purser.
John Tom, Midshipman.
William Leyson, Assistant Surgeon
7 Officers.
1 Gunner.
7 Petty Officers.
1 Corporal of Marines.
25 Able Seamen.
41 Total on board.

This incomplete voyage has only an indirect relation to the discovery of a northwest passage, its sole object having been to complete the land survey of the eastern portion of the north coast of North America, from the western shore of Melville Peninsula as far as to Cape Turn-again, where Captain Franklin's late journey terminated. Being, therefore, connected with Arctic discovery, and under the orders of an officer who commanded the second ship in Parry's second voyage, and directed to proceed to the same portion of the Arctic Seas where he had already been with Parry, it is deemed right and proper to give to this expedition a place in the present narrative; and the more so, as it furnishes a beautiful and striking example of that obedience to orders, that calm and uncomplaining submission, accompanied with pious resignation to the Divine will in the hour of extreme danger, and when the awful moment of death is approaching, which, all so conspicuous in the

character of British seamen, are exemplified in this voyage.

In order to effect the object in view, it was decided, as being the readiest and most simple mode of proceeding, to send a small vessel to Wager River or Repulse Bay, under the orders of an intelligent officer, who, with a small party, should be instructed to cross the Melville Peninsula from one or other of the above-mentioned places, and traverse, by land, the western shore of that peninsula, and the northern shore of North America, to Point Turn-again. Captain Lyon, having been promoted for his services, was selected by Lord Bathurst for this duty; and the Lords Commissioners of the Admiralty having appointed the Griper, a gun-brig of 180 tons, to receive him, gave him directions to leave the ship, during his land journey, in charge of the senior lieutenant.

Lieutenant Francis Harding, after paying off the Griper, served three years as lieutenant of the Espoir, then in the Hecla, and was made commander in 1830; he served in that rank in several ships till the year 1839, and was promoted to the rank of captain in the general promotion of 1841.

Peter Manico was made lieutenant in 1814, served in the present voyage, and is still on the list of lieutenants.

John Tom was promoted to the rank of lieutenant in 1826, where he still remains.

The Griper was considered a very useful vessel of her class; her strength was proved between the ice and the shore of Melville Island, and Captain Clavering had but arrived in England in her, at the end of the preceding year, from a voyage to Spitzbergen and Greenland. She was now, for her present voyage, examined and well strengthened; but, on being stored and amply provisioned, was found to be too deeply laden to cross the Atlantic alone, and therefore his majesty's surveying vessel the Snap, commanded by Lieutenant Bullock, was ordered to receive a portion of them, and to accompany the Griper until she reached the ice, or arrived off Cape Chidley,

They sailed from Yarmouth Roads on the 19th of

June, and arrived at Stromness on the 30th. "On the 3d of July," Captain Lyon says, "we hoisted in two very powerful little ponies, procured at Kirkwall, the only two on the island, and which had been sent from Shetland to an Orkney laird; one was forty inches, the other thirty-eight in height." They also received a fat cow and eight sheep for the crew. The poor cow, it seems, refused to eat, and was therefore killed for present use; but the ponies proved better sailors, walked about the ship as familiarly as large dogs, and improved in their appearance daily. On examining the bags of pemmican, to their great mortification it was found that the fat had melted, and that the water-proof *caoutchouc* was oozing in a clammy state through the canvas.

The worst of all was, that the sluggish Griper required to be towed by the Snap, till a strong breeze and a heavy swell for two days' continuance obliged the former to cast off, when she shipped so many tremendous seas that it became necessary to bring her to under storm stay-sails, which was the more mortifying on observing her companion to be perfectly dry. In short, throughout the whole passage across the Atlantic the Griper was obliged to be towed by the Snap every second or third day, without which she could not have made any progress. On the 3d of August, however, the two ships made the ice, consisting of bergs among the floes; when, according to the instructions, they began to remove the stores and provisions out of the Snap, by which the decks of the Griper were completely crowded. Lyon says the gangways, forecastle, and abaft the mizzen-mast were filled with casks, hawsers, whale-lines, and stream-cables; the lower deck crowded with casks and other stores; not a place left vacant except the mess-tables of the men. Thus lumbered and brought down deep, her sailing qualities, bad enough before, were now expected to be much worse. It was found, also, by observation, that for two days they had been exposed to the united force of the strong currents from Davis's and Hudson's Straits, toward the latter of which they were approaching. On the 4th of August the Snap parted company, to proceed in the farther execution of her services.

On the 6th the Griper had approached Resolution

Island, the sea covered with loose heavy ice, but the day described as lovely, and the sky brilliant; yet the brilliancy and loveliness which surrounded Captain Lyon were not sufficient to prevent him from "yielding to a sensation of loneliness he had never experienced on the former voyage." "I felt most forcibly," he says, "the want of an accompanying ship, if not to help us, at least to break the death-like stillness of the scene." No wonder at this feeling, when all the circumstances of his position are considered.

It must indeed be owned that there was a more than usual want of prudence in sending such a small and sluggish ship alone, through a navigation which had been proved and condemned as one of the most difficult and dangerous of the many difficult ones that occur in this part of the Arctic Seas. The old voyagers, it is true, proceeded in ships much inferior in size and strength to the Griper; yet they rarely navigated those seas alone, and not unfrequently with three or four in company. Captain Lyon says, however, that he was amply compensated for want of a more extensive society, "by having the happiness of knowing that I had officers and men with whom I was confident of continuing on the most friendly terms." Two days after this the ship struck on a rock, and the heavy and continued shocks heeled her so much that the commander "imagined she was turning over." She might have gone down, in which case Lyon's "ample compensation" would have been of little use in this uninhabited and desolate part of the globe.

The constant shipping of seas and the continued wet weather had rendered every thing within the ship "very damp." The two ponies, therefore, with the ducks, geese, and fowls, were handed out upon the ice, where, the captain says, "they presented a most novel appearance." To enliven the scene, about sixty Esquimaux, men and women, in kayaks and oomiaks, visited the strangers, made a loud, screaming noise, and brought with them some trifling articles of barter, chiefly weapons and skin clothes; and our captain says, "I blush while I relate it, two of the fair sex actually disposed of their nether garments—a piece of indecorum I had nev-

er before witnessed." There was no need, however, of blushing, for in the same neighborhood Parry was offered the same thing, but his blushes were spared on finding that the lady wore a double set. Lyon must have been present when Parry's blushes were spared.

Notwithstanding the Griper's dull sailing, they contrived to get her past Charles's Island, Digges's Island, and Cape Wolstenholm by the 20th of August, and two days after saw the high land of Southampton Island. Off Cape Pembroke their compasses were found to be quite useless with the ship's head to the southward, and so powerless that the north point stood wherever it was placed by the finger, but with the ship's head to the northward they all traversed again. This has been always a constant complaint within the Arctic Circle, and particularly near to and between the two northern magnetic poles. It is a subject of such great importance, and has excited so much interest, and for the last five years has been so extensively inquired into experimentally, that there is every reason to hope the principles of terrestrial magnetism will receive a satisfactory elucidation, assisted by the observations conducted under the direction of Captain Sir James Ross in the southern antarctic seas, and also by those which Sir John Franklin has been instructed to make on his present voyage.

Captain Lyon suggests whether this wildness in the compasses may not be caused by the *absence* of the sun or the presence of the aurora. Mr. Kendall, he says, observed that, during the prevalence of a brilliant aurora, the larboard binnacle compass would remain stationary at no particular point, while the starboard one, by a bearing of the pole star, had lessened its usual error two points.

As Captain Lyon was taking his walks on shore, he fell in with a little incident which gave expression to a sentiment of that kindly feeling he was known to possess, and which his own words will best convey. He was crossing an Esquimaux burial-place :

"Near the large grave was a third pile of stones, covering the body of a child, which was coiled up in the same manner [as the other]. A snow-bunting had found its way through the loose stones which composed this little tomb, and its now

forsaken, neatly-built nest was found placed on the neck of the child. As the snow-bunting has all the domestic virtues of our English redbreast, it has always been considered by us as the robin of these dreary wilds, and its lively chirp and fearless confidence have rendered it respected by the most hungry sportsman. I could not, on this occasion, view its little nest, placed on the breast of infancy, without wishing that I possessed the power of poetically expressing the feelings it excited."*—P. 68–69.

The farther they proceeded to the northward up the Welcome, the more sluggish and irregular the compasses got; and Lyon quotes a passage out of Ellis, in his account of Dobbs's expedition in the year 1746, to show that they were the same at that time. A thick fog and a heavy sea, and no land to be seen nor any trust to be placed in the compasses, and withal the water shallowing; the ship not able to face the sea or keep steerage way on her, Captain Lyon says: "I most reluctantly brought her up with three bowers and a stream anchor in succession, but not before we had shoaled to five and a half fathoms, the ship pitching bows under, and a tremendous sea running." In this perilous condition, ignorant in what direction and how distant the land might be, and under the dread, moreover, that the falling tide (from twelve to fifteen feet) would most probably occasion the total destruction of the ship—in order to provide for such an unfortunate event, the longboat was prepared to be hoisted out with the four small ones, and ordered to be stored with arms, ammunition, and provisions; the officers drew lots for their respective boats,

* On reading this passage to an accomplished lady, she said she felt a desire to try what *she* could do with so interesting a subject in the way wished for by Captain Lyon, and produced the following lines:

TO THE SNOW-BUNTING.

"Sweet bird! the breast of innocence
Hath fadeless charms for thee;
Although the spirit long has fled,
And lifeless clay it be;

Thou dreadest not to dwell with death,
Secure from harm or ill,
For on an infant's heart thy nest
Is wrought with fearless skill.

And, like our own familiar bird
That seeks the human friend,
Thou cheer'st the wandering seaman's thoughts
With home, his aim and end."—GEORGIANA.

and the ship's company were stationed to them. "Every officer and man," says the captain, "drew his lot with the greatest composure, although two of the boats would have been swamped the instant they were lowered." In the mean time, the heavy seas continued to sweep over the crowded decks. On the weather clearing a little, a low beach was discovered all round astern of the ship, on which the surf was running to an awful height, and "it appeared but too evident that no human power could save us if driven upon it." At this moment the ship, being lifted by a tremendous sea, struck with great violence the whole length of her keel. This was naturally conceived to be the forerunner of her total wreck. The decks were continually and deeply flooded: for twenty-four hours, it is stated, most of the men had not left these decks, and the captain had not been in bed for three nights.

In such a hopeless case, Captain Lyon did that which a right-minded British naval officer never fails to do on the apparent approach of the last extremity. But it is due to him and his brave seamen to describe their situation and conduct on this trying occasion in his own words:

"Although few or none of us had any idea that we should survive the gale, we did not think that our comforts should be entirely neglected, and an order was therefore given to the men to put on their best and warmest clothing, to enable them to support life as long as possible. Every man, therefore, brought his bag on deck, and dressed himself; and in the fine athletic forms which stood exposed before me, I did not see one muscle quiver, nor the slightest sign of alarm. The officers each secured some useful instrument about them for the purposes of observation, although it was acknowledged by all that not the slightest hope remained. And now that every thing in our power had been done, I called all hands aft, and to a merciful God offered prayers for our preservation. I thanked every one for their excellent conduct, and cautioned them, as we should, in all probability, soon appear before our Maker, to enter his presence as men resigned to their fate. We then all sat down in groups, and, sheltered from the wash of the sea by whatever we could find, many of us endeavored to obtain a little sleep. Never, perhaps, was witnessed a finer scene than on the deck of my little ship, when all hope of life had left us. Noble as the character of

the British sailor is always allowed to be in cases of danger, yet I did not believe it to be possible that, among forty-one persons, not one repining word should have been uttered. The officers sat about wherever they could find shelter from the sea, and the men lay down conversing with each other with the most perfect calmness. Each was at peace with his neighbor and all the world; and I am firmly persuaded that the resignation which was then shown to the will of the Almighty was the means of obtaining His mercy. God *was* merciful to us; and the tide, almost miraculously, fell no lower."—P. 79, 80.

They were saved; and the place of their extreme danger was, as speedily as possible, ascertained by observation to be in lat. 63° 35′ 48″, long. 86° 32′ 0″, and it was very properly named the *Bay of God's Mercy*. On the fog clearing away it was found to be immediately in the center of the Welcome. They now discovered that their fresh water, on the 4th of September, was so greatly reduced, that, in their present condition and the situation of the ship, none could be afforded for the poor little ponies which had survived the storm; they were therefore obliged to be sacrificed; their hay, besides, had been all thrown overboard in the storm.

On the 12th of September, when they had arrived opposite the mouth of the Wager River, and between it and Southampton Island, a gale of wind arose, and with it also the sea; the dull Griper now made no progress, but "remained actually pitching forecastle under, with scarcely steerage way." One alternative alone remained, and that was to bring the ship up. "We found that the anchors held, although the ship was dipping bowsprit and forecastle under, and taking green seas over all. Thick-falling sleet covered the decks to some inches in depth, and, withal, the spray froze as it fell." To add to their anxiety, two or three streams of ice, with deep, solid pieces among them, were seen in the evening to be driving down upon the ship. The night was piercingly cold, the sea washed the decks fore and aft, constant snow fell, the lower deck was afloat, the men's hammocs thoroughly soaked, and the poor fellows could get no rest.

"Never shall I forget the dreariness of this most anxious night. Our ship pitched at such a rate that it was not possi-

ble to stand even below, while on deck we were unable to move without holding by ropes, which were stretched from side to side. The drift-snow flew in such sharp, heavy flakes that we could not look to windward, and it froze on deck to above a foot in depth. The sea made incessant breaches quite fore and aft the ship, and the temporary warmth it gave while it washed over us was most painfully checked by its almost immediately freezing on our clothes. To these discomforts were added the horrible uncertainty as to whether the cables would hold until daylight, and the conviction also that if they failed us we should instantly be dashed to pieces, the wind blowing directly to the quarter in which we knew the shore must lie. Again, should they continue to hold us, we feared, by the ship's complaining so much forward, that the bits would be torn up, or that she would settle down at her anchors, overpowered by some of the tremendous seas which burst over."—P. 100, 101.

The hurricane continuing, it can better be imagined than told what kind of night they were doomed to pass. "I never beheld," says Captain Lyon, "a darker night." At dawn on the 13th the best bower anchor parted, and the gale blew with such terrific violence as to leave little reason to expect that the other anchors would hold long. In short, the prospect was now most perilous and pitiable.

"At 6 A.M. all farther doubts on this particular point were at an end, for, having received two overwhelming seas, both the other cables went at the same moment, and we were left helpless, without anchors or any means of saving ourselves, should the shore, as we had every reason to expect, be close astern. And here again I had the happiness of witnessing the same general tranquillity as was shown on the 1st of September. There was no outcry that the cables were gone; but my friend Mr. Manico, with Mr. Carr, the gunner, came aft as soon as they recovered their legs, and in the lowest whisper informed me that the cables had all parted. The ship, in trending to the wind, lay quite down on her broadside; and as it then became evident that nothing held her, and that she was quite helpless, each man instinctively took his station, while the seamen at the leads, having secured themselves as well as was in their power, repeated their soundings, on which our preservation depended, with as much composure as if we had been entering a friendly port. Here again that Almighty power, which had before so mercifully preserved us, granted us his protection."—P. 102, 103.

They were still, however, in a very melancholy condition, expecting every moment to strike, and not having the least idea where they had anchored or where they now were; every rope was incrusted with a thick coating of ice, the decks so deeply covered with frozen snow and freezing sea water as to make it scarcely possible to stand; and all hands being wet and half frozen, without having had any refreshment for so many hours, "our situation," says the captain, "was rendered miserable in the extreme."

"In the afternoon, having well weighed in my mind all the circumstances of our distressed situation, I turned the hands up, and informed them that, having now lost all our bower anchors and chains, and being, in consequence, unable to bring up in any part of the Welcome; being exposed to the sets of a tremendous tideway and constant heavy gales, one of which was now rapidly sweeping us back to the southward, and being yet above eighty miles from Repulse Bay, with the shores leading to which we were unacquainted; our compass useless, and it being impossible to continue under sail with any degree of safety in these dark twelve-hour nights, with the too often experienced certainty that the ship could not beat off a lee-shore even in *moderate* weather, I had determined, in making southing, to clear the narrows of the Welcome, after which I should decide on some plan for our future operations."—P. 105.

Their situation, indeed, was a hopeless one: without anchors, and with a crippled ship—compasses which, instead of guiding, only misled them—what plan could be devised to pursue? To approach the shore was the next step to the destruction of the ship, and in that event, to land in a snow-covered, frozen, and desolate country, producing nothing of food for man, and destitute of human beings, would be equally and inevitably destruction to every living creature that might have escaped from the ship. Two alternatives, therefore, only were left: either to endeavor to let the ship float with the southerly current, with what sail she could carry, to Hudson's Bay, or to continue a direct course for England. In consulting his officers what they considered best to be done, they individually answered that, deprived as the ship was of anchors and much of her stores, with the little reliance to be placed on the compasses, they thought

the best to be done would be to return to England without farther delay: a course was shaped accordingly.

The voyage along this eastern coast of North America has been tried many times, and always found more or less disastrous. It is a route utterly void of interest in the best of ships, in the best of weather, and in the best part of the season. Parry, with his two well-equipped ships, was teased and hampered with the floating ice, the fogs, and the currents, which the state of his compasses also made still more embarrassing. But of this harassing navigation, in the present instance, nothing more need be said, as nothing farther occurred on the return passage that requires any notice, unless it be the intercourse they had in the lower part of the Welcome with a party of Esquimaux, whose character, so different from that generally of this mild and quiet race, is no doubt truly explained.

"I could not but compare the boisterous, noisy, fat fellows who were alongside, in excellent canoes, with well-furnished iron-headed weapons and handsome clothing, with the poor people we had seen at Southampton Island; the latter with their spear-heads, arrows, and even knives of chipped flint, without canoes, wood, or iron, and with their tents and clothes full of holes, yet of mild manners, quiet in speech, and as grateful for kindness as they were anxious to return it, while those now alongside had, perhaps, scarcely a virtue left, owing to the roguery they had learned from their annual visits to the Hudson's Bay ships. An air of saucy independence, a most clamorous demand for presents, and several attempts at theft, some of which were successful, were their leading characteristics. Yet I saw not why I should constitute myself the censor of these poor savages; and our barter was accordingly conducted in such a manner as to enrich them very considerably."—P. 128, 129.

Notwithstanding the indifferent character here given to this tribe, Captain Lyon allows them credit for considerable ingenuity. "Nothing new," he says, "was seen at this visit, if I except a most ingenious piece of carving, from the grinder of a walrus: this was a very spirited little figure of a dog lying down and gnawing a

bone; and although not much above an inch in length, the animal's general expression was admirable."* He adds that they procured a few little *ivory bears* well executed.

The passage to England produced nothing remarkable; the Griper arrived at Portsmouth on the 10th of November, her crew much exhausted by the severity of the weather and wash of the sea over the ship; and three were sent to the hospital. Captain Lyon thus concludes his narrative:

"Thus ends the journal of our unsuccessful expedition. Before I take leave of my readers, I hope I may be allowed to make a few observations respecting my shipmates, seamen as well as officers, whose conduct on all occasions was such as to entitle them to the warmest praise I can bestow. I may with truth assert that there never was a happier little community than that assembled on board the Griper. Each succeeding day, and each escape from difficulties, seemed to bind us more strongly together; and I am proud to say, that during the whole of our voyage neither punishment, complaint, nor even a dispute of any kind occurred among us."—P. 144.

The narrative of this unsuccessful voyage displays a fine example of manly resolution under the most distressing difficulties, and of pious resignation to the Divine will, on the part of both officers and men, at a time when a fatal crisis appeared to be inevitable. It is one of the many cases in which the devoutly religious character of our British seamen is eminently conspicuous, and which never fails to guard them against despondency, though surrounded with dangers and difficulties such as, to men unaccustomed to them, would be apt to create despair. Whether, in the present instance, the critical eye of a thorough-bred seaman might or might not discover something approaching to indiscretion in conducting the navigation of the ship during a dense fog, with compasses inactive, or acting only to deceive, unknowing in what direction the land lay; whether it was judicious to let go all the anchors at once—these are points that are to be decided only by nautical men and

* The spirited original of this little figure was presented by Captain Lyon to the writer of this narrative, and is truly an ingenious piece of carving, though the wood engraving is far from doing it justice.

by a direct knowledge of all the circumstances existing at the time. That which is here to be observed upon, especially by a landsman, is the cool, the unflinching, the obedient demeanor of the men, and the steady, undisturbed conduct of the officers: these are the subjects under consideration, and which are deserving of the highest degree of admiration and praise. The drawing of lots for the choice of boats, "two of which must inevitably have swamped the moment they were let down into the sea," and the cool and orderly manner in which every man brought up his bag and dressed himself in his best clothes, to take leave of this world, are traits peculiar in the character of British seamen, not to be found in any other class of men, and are worthy of all admiration.

The ship is commended by the captain for her strength, but condemned for her sluggish and bad sailing qualities. She appears, indeed, to have been utterly unfit to contend with this worst of all possible navigations, though she had on more than one occasion to contend with the icy seas of the Arctic regions, both in the Polar and the Spitzbergen seas. But however fit a ship may be to encounter those seas, it certainly is not fitting, when employed on peculiar service, that any ship should be sent into them alone. The smallness of her size is no objection. Our old navigators were content with barks of ten, fifteen, up to fifty tons' burden; but then, as before stated, they were rarely, if ever, sent alone; two or three, and frequently more, formed their expeditions of discovery, and the reason is obvious; a single ship wrecked in those seas, whose coasts are uninhabited by human beings, must entail certain destruction on the life of every creature on board. There yet remains to be told, in the course of this narrative, another instance of the miraculous escape of a single ship, sent nearly into the same quarter, and for a similar purpose—an oversight which, it is to be earnestly hoped, may never again be repeated. The people of England know the value of their seamen, and never grudge the expense which is fairly and honestly bestowed on her navy, the soul of which *is* her seamen, whose lives, were it only out of mere policy, ought not heedlessly, or from a mistaken frugality, to be endangered.

CHAPTER VIII.

PARRY'S THIRD VOYAGE,

1824, 1825,

for the Discovery of a Northwest Passage from the Atlantic to the Pacific, in H. M. ships Hecla and Fury.

THE two ships appointed for this service were the same as on the former voyage, but Parry now took command of the Hecla, and Hoppner of the Fury. They were commanded, officered, and manned as under:

THE HECLA.

William Edward Parry, Captain and Commander.
J. Land Wynn, Joseph Sherer, Henry Foster, } Lieutenants
Samuel Neill, M.D., Surgeon.
W. H. Hooper. Purser.
William Rowland, Assist. Surg.
John Brunton, F. R. M. Crozier, Charles Richards, Hor. Nelson Head, } Midshipmen.

11 Officers.
James Harrison, Clerk.
J. Brothers, Gunner.
William Smith, Boatswain.
George Fiddis, Carpenter.
John Allison, Greenland Master.
Geo. Champion, Greenland Mate.

6 Warrant Officers.
45 Seamen and Marines.

62 Total on board.

FURY.

H. P. Hoppner, Commander.
Hor. Thos. Austin, Jas. Clarke Ross, } Lieutenants.
A. M'Laren, Surgeon.
James Hulse. Purser.
Thomas Bell, Assistant Surgeon.
Berkley Westropp, Chas. Crump Waller, Edward Bird, } Midshipmen.

9 Officers.
William Mogg, Clerk.
James Moore, Gunner.
William Wentworth. Boatswain.
Charles Purfur, Carpenter.
George Crawford, Greenland Master.
Thomas Donaldson, Greenland Mate.

6 Warrant Officers.
45 Seamen and Marines.

60 Total on board.

Any thing approaching the shape of an apology from Captain Parry himself will be deemed, as it ought to be, superfluous; nor will it be thought necessary that, on the introduction of his narrative, he should be called upon for any explanation. He says:

"I have considered it expedient to avoid all minute and technical description of our first season's operations, which, whatever vexation they may have cost ourselves, would probably have afforded little interest or amusement to the

public. In the circumstances attending our second season's navigation, and particularly those relating to the loss of the Fury, I have deemed it right to enter more into detail; considering, on the one hand, that the loss of one of his majesty's ships is an event too serious to be lightly disposed of, and on the other, that I could thus alone do justice to the unwearied zeal and exertions of Captain [Commander] Hoppner, our officers and men, on that occasion."—*Introduction*, p. xiii.

COMMANDER H. P. HOPPNER served as lieutenant with Parry in the Alexander, and also as lieutenant in Parry's two preceding voyages, in all of which he was considered an able, active, and zealous officer. He had therefore worked his way to the rank of commander. "To Commander Hoppner, who," says Parry, "has been my constant companion from the very commencement of these enterprises, I feel every possible obligation for his steady and persevering zeal in this service, and for his advice and assistance on every occasion."

LIEUTENANT FOSTER is highly spoken of by Captain Parry "for the various and multiplied branches of useful science to which his attention was at all times directed;" and he adds, "our observations upon atmospheric refractions in high latitudes, and on the diurnal variation, and change of intensity of the magnetic needle, together with Lieutenant Foster's experiments with an invariable pendulum, have been communicated to and read before the Royal Society. He was also first lieutenant of the Hecla, which carried Parry to Spitzbergen on his attempt to reach the Pole. He accompanied Clavering and Sabine in the Griper to Spitzbergen and Greenland in 1823, and proved a most useful and intelligent assistant in the pendulum observations. His last service was that of co-operating with Mr. Lloyd in leveling across the Isthmus of Panama, when he was unfortunately drowned in the River Chagres. By his death the service was deprived of one of its most useful, able, and scientific navigators, and his loss was felt and deeply lamented by all who had the pleasure of his acquaintance. His character, in fact, was established as among the first scientific officers of his time.

LIEUTENANT JAMES CLARKE ROSS.—Too much can not be said in praise of this young officer, who worked

himself, entirely by his own exertions, to the rank of lieutenant, and by his own self-taught acquirements, which extended to every department of science, he arrived at the highest step in the service (short of the flag): but more of him hereafter.

Lieutenant Horatio T. Austin, after distinguishing himself as an able officer, and having much good and active service, received his promotion as captain in 1838, and is now captain of the William and Mary yacht.

Lieutenant Joseph Sherer, by his good service, raised himself to the rank of captain in 1841, and received the honor of K.H.

"The public," Parry says, "are very highly indebted to Dr. Samuel Neill, who, in addition to his professional duties, entirely superintended the public collection of specimens of natural history, and has furnished a variety of important geological notices;" and he refers to the Zoological Appendix by Lieutenant Ross as "furnishing ample evidence of the attention paid by that gentleman (Neill) to this department of science, in addition to the immediate duties of his station."

F. R. M. Crozier, midshipman, a most zealous young officer, who, by his talents, attention, and energy, has succeeded in working himself up to the top of the service. He was lieutenant of the Hecla in Parry's Polar voyage, and volunteered with Captain James Ross to go in the midst of winter into the Arctic Seas for the relief of the missing whale ships; was made captain in 1841, and commanded the second ship in Captain James Ross's Antarctic Expedition, and is now second in command with Captain Sir John Franklin.

John Brunton, the colleague of Crozier in this voyage, arrived at no higher step than that of lieutenant, and is now serving as such in the Coast Guard.

C. Richards and Horatio Nelson Head, midshipmen, do not appear on the list of naval officers.

Berkley Westropp, midshipman, was made a lieutenant in 1825, and still continues so, having left the navy for a civil employment in the Humane Society.

Edward Bird appears on the list as a captain of 1843, but he is not to be found among the Arctic voyagers.

ALLAN M'LAREN was appointed surgeon of a ship of the line.

WILLIAM HARVEY HOOPER, purser, was the friend and associate of Captain Parry, and served with him in the Alexander in Ross's voyage, and in all the three of Parry, a most faithful and trustworthy officer. He was rewarded for his services by a civil appointment in Greenwich Hospital, where he died, and his widow is now matron of the Greenwich Schools.

The ships sailed from the Nore on the 19th of May, 1824, the William Harris, transport, accompanying them. Their instructions were to make the best of their way to Davis's Strait and cross over to Lancaster Sound, and, proceeding through Barrow's Strait, endeavor to make, through Prince Regent's Inlet, a passage into the sea which bounds the continent (of America) on its northern coast, and thence westward to the Pacific. The reason assigned for this route in the instructions is, "The strong opinion which you have conveyed to us in favor of the attempt through Prince Regent's Inlet; the confident hope which you express that the ice, which, at the period of the year when you visited the inlet, obstructed your passage, was likely to be removed by circumstances of season and weather within the navigable part of the year;" and, it is added, "the confidence which we are justified in placing in your judgment and experience determine us to authorize and direct you to pursue the course which you consider the most promising, namely, through Prince Regent's Inlet."

On the 18th of June, having reached the latitude of $60\frac{3}{4}°$, they saw the first iceberg, and from that time fell in with those bodies of ice almost daily. At a Danish settlement in Davis's Strait, called Lievely, they found Lieutenant Graat, who had been employed on a survey of the Greenland coast, and received much civility from him and other gentlemen belonging to the settlement. As soon as the stores and provisions were transhipped, the William Harris was released and ordered to return home. On leaving the harbor the Hecla struck on a sunken rock. On the 17th of July the ice began to close round the ships. "From this time," Parry says,

"the obstructions from the quantity, magnitude, and closeness of the ice were such as to keep our people almost constantly employed in heaving, warping, or sawing through it, and yet with so little success, that, at the close of July, we had only penetrated seventy miles to the westward." Here, on the 1st of August, being closely beset, a gale of wind pressing the ice together, and overlaying mass upon mass, "the Hecla received several very awkward 'nips,' and was once fairly laid on her broadside by a strain which must inevitably have crushed a vessel of ordinary strength." The 9th of September had arrived "before we succeeded in releasing ourselves from the more than ordinary barrier of ice in the middle of Baffin's Bay."

They had continued their efforts to push to the northward, but it was not till the 29th of August that they reached the latitude of 73° 15′, longitude 63° 40′, in which situation, from the experience of 1819, they had reason to expect there would scarcely have been any ice at this season. The obstructions, however, continued till the 8th of September, then in latitude 74° 7′ and longitude 69° 54′, being about 110 miles to the N.N.W. of the situation in which they cleared the "pack" in the year 1819. Forty miles from hence they passed through the barrier of ice, after an unwearied exertion of eight tedious weeks by the officers and men to overcome it.

The extraordinary weather which accompanied the low temperature of August is noticed as something remarkable. It is stated by Parry that, of the thirty-one days in that month, there was actually but one in which they had not a deposit of snow, sleet, rain, or fog during some part of the twenty-four consecutive hours; and the northerly wind, which is the usual harbinger of a clear, dry, wholesome atmosphere, was just as thick as any other. And he adds, "for ten weeks in July, August, and September, though we were constantly watching for an opportunity of airing the ships' companies' bedding on deck, we could only venture to do so once."

In their struggle through the ice of Davis's Strait and Baffin's Bay, Parry noticed the set of the currents by which the whole body of the ice might be actuated.

"It was obvious," he says, "that a daily set to the southward obtained when the wind was northerly, differing from two or three to eight or ten miles per day, according to the strength of the breeze; but a northerly current was equally apparent when the wind blew from the southward." But he observes, as a remarkable circumstance, that a *westerly* set was frequently apparent, even against a fresh breeze blowing from that quarter.

On the 10th of September they entered that "magnificent inlet," Sir James Lancaster's Sound, and found it entirely, as usual, free from ice, except here and there a berg, "floating about in that solitary grandeur," of which these enormous masses are said to convey so sublime an idea. Proceeding "vexatiously slow" on the 13th, they had the mortification to perceive the sea ahead covered with young ice, on entering which recourse was had to "sallying," breaking it with boats ahead, and various other expedients, all alike ineffectual, without a fresh and free breeze furnishing a constant impetus; "so that, after seven or eight hours of unsuccessful labor in this way, we were obliged to remain as we were, fairly and immovably beset." Thus for three days they continued struggling with the young ice to little or no purpose, now and then gaining half a mile of ground to windward in a little "hole" of open water, and after all rather losing ground than otherwise, while the young ice was every hour increasing in thickness.

On the 17th they found themselves driven back to the eastward of Admiralty Inlet, the young ice still increasing in thickness. This was certainly a most severe trial of the patience and perseverance of Captain Parry, of a different kind, but equally annoying as that of "Fox's Channel" and the "Frozen Strait." It once occurred to him that as, in crossing Baffin's Bay, he had expended unexpectedly nearly the whole of the season, and as, under particular circumstances, his instructions authorized him to return to England, it was high time to make up his mind, which was to him a point speedily decided. "I could not," he says, "have a moment's hesitation as to the propriety of pushing on as far as the present season would permit, and then giving a fair trial, during the whole of next summer, to the route I was directed by

my instructions to pursue; and in this view Commander Hoppner entirely concurred. The fact is, that the summer or season was already expended before they got into the inlet, and might probably, also, be expended in the following year before it should be found practicable to get out of their winter quarters, unless, indeed, as will shortly appear, these quarters were so favorably circumstanced as to admit of an early departure from them.

It would be useless to enter into a detail of the trials of temper and patience they were compelled to undergo after this decision, one of which, however, may be stated. In a strong current setting to the eastward at the rate of two miles an hour, without a chance of stemming it, and beset as they were in young ice, during an unusually dark night of nine or ten hours' duration, with a heavy fall of snow, they found themselves utterly in a helpless state. "The consequence was, that when we made the land on the morning of the 23d, we had been drifted the incredible distance of eight or nine leagues during the night, finding ourselves off the Wollaston Islands, at the entrance of Navy Board Inlet." Still they persevered, and the help of an easterly breeze which sprang up on the 26th, and gradually freshened, promised in earnest to take them, as at last it did, into Prince Regent's Inlet on the 27th; and by beating up, they came to the entrance of Port Bowen, "where," says Parry, "for two or three days past, I had determined to make our wintering place, if, as there was but little reason to expect, we should be so fortunate as to push the ships thus far." The old process of cutting a canal in the ice for the reception of the ships was resorted to, and, as Parry states, "on the evening of the 1st of October we had accomplished enough for our purpose, and the ships were warped into their winter stations, which we had the satisfaction to think were extremely favorable for an early release in the spring."

Nothing remarkable was observed in the passage through Lancaster Sound. A boat was sent on shore in a bay near Cape Warrender. Dr. Neill reports, "The beach was covered with fragments of flesh-colored feldspar, closely studded with red garnets, from the size of a pea to that of a walnut; the rock was of gneiss forma-

tion, the greater part of it composed of large plates thickly set with garnets. The surface of the ground was almost entirely covered either with snow, or, in absence of it, with luxuriant reindeer moss. The party succeeded in killing three reindeer out of a small herd. Higher up the strait on the side of a hill, at three or four hundred feet above the level of the sea, Lieutenant Ross found several pieces of coal, which burned with a clear, bright flame; he saw two hares, and killed one of them; also a fox, a pair of ravens, some wingless ducks, and several snow-buntings. Parry says they observed a number of whales in every part of Lancaster Sound. They observed, also, a great many narwhals and a few walruses in Barrow's Strait, and thinks they might have seen many more of both but for the continual presence of the young ice.

This being the *fourth* winter which Parry was doomed to pass in the frozen regions of the North, he knows not, he says, how he can do better than pursue a method similar to that heretofore practiced, by confining himself rather to the pointing out of any *difference* observed now and formerly, than by entering on a fresh description of the actual phenomena.

"To those who read, as well as to those who describe, the account of a winter passed in these regions can no longer be expected to afford the interest of novelty it once possessed, more especially in a station already delineated with tolerable geographical precision on our maps, and thus, as it were, brought near to our firesides at home. Independently, indeed, of this circumstance, it is hard to conceive any one thing more like another than two winters passed in the higher latitudes of the Polar regions, except when variety happens to be afforded by intercourse with some other branch of 'the whole family of man.' Winter after winter, nature here assumes an aspect so much alike, that cursory observation can scarcely detect a single feature of variety. The winter of more temperate climates, and even in some of no slight severity, is occasionally diversified by a thaw, which at once gives variety and comparative cheerfulness to the prospect. But here, when once the earth is covered, all is dreary monotonous whiteness—not merely for days or weeks, but for more than half a year together. Whichever way the eye is turned, it meets a picture calculated to impress upon the mind an idea of inanimate stillness, of that motionless torpor

with which our feelings have nothing congenial—of any thing, in short, but life. In the very silence there is a deadness with which a human spectator appears *out of keeping*. The presence of man seems an intrusion on the dreary solitude of this wintery desert, which even its native animals have for a while forsaken."—P. 40, 41.

Among the winter arrangements, Captain Parry speaks in the highest terms of Sylvester's "warming apparatus," to which he ascribes the comforts and conveniences, and with them the general health of the seamen, which exceeded those of any former experience: "a contrivance," he says, "of which I scarcely know how to express my admiration in adequate terms."

"The alteration adopted on this voyage, of placing this stove in the very bottom of the hold, produced not only the effect naturally to be expected from it, of increasing the rapidity of the current of warm air, and thus carrying it to all the officers' cabins with less loss of heat in its passage, but was also accompanied by an advantage scarcely less important, which had *not* been anticipated. This was the perfect and uniform warmth maintained during the winter in both the cable-tiers, which, when cleared of all the stores, gave us another habitable deck, on which more than one third of the men's hammocs were berthed, thus affording to the ships' companies, during seven or eight months of the year, the indescribable comfort of nearly twice the space for their beds, and twice the volume of air to breathe in. It need scarcely be added how conducive to wholesome ventilation, and to the prevention of moisture below, such an arrangement proved; suffice it to say that we have never before been so free from moisture, and that I can not but chiefly attribute to this apparatus the unprecedented good state of health we enjoyed during this winter."—P. 44, 45.

It is greatly to be lamented that this testimony of the good effects of a very simple contrivance had not been attended to before the inefficient, troublesome, and expensive quackery apparatus had been permitted in certain of her majesty's ships.

The preparations and precautionary measures necessary for securing the ships occupied all hands for some time, and they were not finally settled till about the middle of October. Parry omits no opportunity of recording whatever may appear to be conducive to the benefit of trade or navigation. Thus he states:

"Late as we had this year been in reaching Sir James Lancaster's Sound, there would still have been time for a ship engaged in the whale fishery to have reaped a tolerable harvest, as we met with a number of whales in every part of it, and even as far as the entrance of Port Bowen. The number registered altogether in our journals is between twenty and thirty, but I have no doubt that many more than these were seen, and that a ship expressly on the look-out for them would have found full occupation for her boats. Several which came near us were of large and 'payable' dimensions."—P. 36, 37.

The occupation and diversion of the seamen's minds, as well as the regularity of their bodily exercise, were not likely to be unattended to by so prudent and experienced a commander as Captain Parry; but he was equally attentive to what had been done on former voyages; and as the same officers and men were among the present ones, a little variety, therefore, was thought to be desirable. "Our former amusements," he says, "being almost worn threadbare, it required some ingenuity to devise any plan that should possess the charm of novelty to recommend it." This purpose was completely answered, however, by a proposal of Commander Hoppner to attempt a *masquerade*, in which officers and men should alike take a part; but which, without imposing any restraint whatever, should leave every one to their own choice, either to join in this diversion or not. Parry was delighted with it.

"It is impossible that any idea could have proved more happy or more exactly suited to our situation. Admirably dressed characters of various descriptions readily took their parts, and many of these were supported with a degree of spirit and genuine humor which would not have disgraced a more refined assembly; while the latter might not have disdained, and would not have been disgraced by, copying the good order, decorum, and inoffensive cheerfulness which our humble masquerades presented. It does especial credit to the dispositions and good sense of our men, that, though all the officers entered fully into the spirit of these amusements, which took place once a month, alternately on board each ship, no instance occurred of any thing that could interfere with the regular discipline, or at all weaken the respect of the men toward their superiors. Ours were masquerades without licentiousness—carnivals without excess."—P. 49, 50.

But an occupation of less amusement, perhaps, but not less assiduously pursued, and of infinitely more eventual benefit, was furnished by the re-establishment of schools, under the voluntary superintendence of Mr. Hooper in the Hecla, and of Mr. Mogg in the Fury.

"By the judicious zeal of Mr. Hooper, the Hecla's school was made subservient, not merely to the improvement of the men in reading and writing (in which, however, their progress was surprisingly great), but also to the cultivation of that religious feeling which so essentially improves the character of a seaman, by furnishing the highest motives for increased attention to every other duty. Nor was the benefit confined to the eighteen or twenty individuals whose want of scholarship brought them to the school-table, but extended itself to the rest of the ship's company, making the whole lower deck such a scene of quiet rational occupation as I never before witnessed on board a ship. And I do not speak lightly when I express my thorough persuasion that to the moral effects thus produced upon the minds of the men were owing, in a very high degree, the constant, yet sober cheerfulness, the uninterrupted good order, and even, in some measure, the extraordinary state of health which prevailed among us during this winter."—P. 50, 51.

The several officers had full employment during their winter confinement in the various observations to which their attention was to be directed. Magnetism was one of the earliest subjects after the erection and arrangement of the observatory on shore. The interesting fact was discovered of an increase in the variation of the magnetic needle, since their former visit in 1819, amounting to about nine degrees, namely, from 114° to 123°. A regular series of hourly experiments on the magnetic intensity was instituted, by which was found a diurnal change of intensity, exhibiting a regular increase from the morning to the afternoon, and as regular a decrease from the afternoon to the morning. "It also appeared," says Parry, "that the sun, and, as we had reason to believe, the relative position of the sun and moon with reference to the magnetic sphere, had a considerable influence both on the intensity and diurnal variation, although the exact laws of this influence may still remain to be discovered." It is to be hoped that the result of the observations that have been carrying on for three years by England and its colonies, and also in various

parts of Europe and in America, in observatories especially erected for observations and experiments in all that regards terrestrial magnetism, will throw much light on this interesting, and, it may be said, mysterious subject.

The refraction of the atmosphere is fully considered, and the method of obtaining it in low temperatures is given in a paper by Mr. Fisher. The observed refractions of stars at low altitudes and temperatures, the solar and terrestrial refractions by observations of the several officers, are carefully registered in the Appendix. The various meteorological observations employed a considerable portion of their time; but this winter, Parry says, afforded but few brilliant displays of the aurora. One of them, however, is noticed as something remarkable.

"While Lieutenants Sherer, Ross, and myself were admiring the extreme beauty of this phenomenon from the observatory, we all simultaneously uttered an exclamation of surprise at seeing a bright ray of the aurora shoot suddenly downward from the general mass of light, *and between us and the land*, which was there distant only three thousand yards. Had I witnessed this phenomenon by myself, I should have been disposed to receive with caution the evidence even of my own senses as to this last fact; but the appearance conveying precisely the same idea to three individuals at once, all intently engaged in looking toward the spot, I have no doubt that the ray of light actually passed within that distance of us."—P. 62.

It is unnecessary to enumerate the number of lunar observations for the longitude, and those for the latitude by the sun and various stars, by all the officers; the account of the rates of the chronometers, all of which are given in the Appendix, with an account of the Borealian Quadrupeds and Birds by Dr. Richardson, of Botany by Professor Hooker, and of Zoophytes by Dr. Fleming. And it is but justice to all the officers to say that they most willingly and cordially followed the example of their excellent, intelligent, and indefatigable commander in their regularity and attention requisite for making the various observations.*

* An account will be given at the close of this chapter of the several subjects contained in the Appendix, and of the officers employed upon them.

It will readily be imagined with what anxiety, in the early part of the year, the reappearance of the sun was looked for. Some, by ascending a high hill, got a glimpse of him on the 2d of February; on the 15th he was visible at the observatory, and at the ships on the 22d, "after an absence of one hundred and twenty-one days." But it is a long time after the sun's reappearance that the effect of his rays, as to warmth, becomes perceptible; week after week passes over with scarcely any rise in the thermometer, except for an hour or two during the day. In this year Parry says the thermometer did not rise above *zero* till the 11th of April, having remained below that point of the scale for one hundred and thirty-one successive days; but he mentions this as the only instance of the kind he had ever known.

Parties were sent from Port Bowen to travel by land on the sea-coast on each side of the port. The first, however, was directed to proceed inland to the eastward under Commander Hoppner. This party returned after a very fatiguing journey, having with difficulty traveled a degree and three quarters easterly, in the lat. 73° 19′; but no appearance of sea was observed in that direction; the country consisted of ravines, many of them four or five hundred feet deep, and very precipitous. During the whole fortnight's excursion scarcely a patch of vegetation could be seen; a few snow-buntings and some ivory gulls were all the animals they met with to enliven this most barren and desolate country.

Hares, foxes, and bears were sparingly met with; and the last animal is not disposed to have any affection for mankind. Instances, however, did occur to show that maternal affection is not wanting in this animal, but was as apparent in it as in that of the walrus described by Beechey:

"A she-bear, killed in the open water, on our first arrival at Port Bowen, afforded a striking instance of maternal affection in her anxiety to save her two cubs. She might herself have easily escaped the boat, but would not forsake her young, which she was actually 'towing' off, by allowing them to rest on her back, when the boat came near them. A second similar instance occurred in the spring, when two cubs having got down into a large crack in the ice, their mother placed herself before them, so as to secure them from the at-

tacks of our people, which she might easily have avoided herself."—P. 79.

The two other parties, consisting of four men each, under the respective commands of Lieutenants Sherer and Ross, were directed to travel, the former to the southward, and the latter to the northward, along the coast of Prince Regent's Inlet, for the purpose of surveying it accurately. Parry was anxious, also, to ascertain the state of the ice to the northward, to enable him to form some judgment as to the probable time of their liberation. These parties found the traveling along shore so good as to enable them to extend their journeys far beyond the points intended. Lieutenant Ross brought the welcome intelligence of the sea being perfectly open and free from ice at the distance of twenty-two miles to the northward of Port Bowen, "by which," says Parry, "I concluded—what, indeed, had long before been a matter of probable conjecture—that Barrow's Strait was not permanently frozen during the winter." From the tops of the hills about Cape York, beyond which promontory Lieutenant Ross traveled, no appearance of ice could be distinguished.

Lieutenant Sherer returned to the ships about the same time, having performed a rapid journey as far as $72\frac{1}{4}^{\circ}$, and making an accurate survey of the whole coast to that distance; and Parry regrets that he was not furnished with more provisions and a larger party, to have enabled him to travel round Cape Kater, which is probably not far distant from one of the northern Esquimaux stations, mentioned in his journal of the preceding voyage.

On the 12th of July the ice began to break up in the neighborhood, and about the same time the ice which crossed the mouth of the harbor detached itself at an old crack, and drifted off, leaving only about one mile and a quarter between the ships and the sea. The men were now employed, with the greatest cheerfulness and alacrity, from seven in the morning till seven in the evening, daily, when, on the 19th, a very welcome stop was put to their operations by the entire separation of the floe across the harbor. By a renewal of their labor the whole night they succeeded in getting the

ships clear, and also, in two hours' towing, out to sea, after an imprisonment of between nine and ten months.

"On standing to sea, we sailed," says Parry, "with a light southerly wind, toward the western shore of Prince Regent's Inlet, which it was my first wish to gain, on account of the evident advantage to be derived from coasting the southern part of that portion of land called in the chart 'North Somerset,' as far as it might lead to the westward; which, from our former knowledge we had reason to suppose it would do, as far, at least, as the longitude of 95°, in about the parallel of $72\frac{3}{4}°$, that is, at Cape Garry." But on his first voyage he had been below 70° (Cape Kater), on the east coast, and the two shores were nearly parallel to each other: and there the crossing might not have been difficult; besides the certainty of going down an eastern coast, in comparison of taking a western one, according to Captain Parry's own showing, makes it the more remarkable he did not choose the former. It might also have been supposed that a desire to extend the knowledge of the eastern coast might have been a strong inducement, even if only to examine the opening of the Fury and Hecla Strait into the Regent's Inlet, which Mr. Reid's report leaves in rather an unsatisfactory state, and also to have looked into the Gulf of Akkoolee, which is described by the Esquimaux lady.

Parry, however, had doubtless good reasons for his choice, one of which was the apparent tendency to the westward of the shore of North Somerset. That he had well weighed the case appears by his own showing:

"I shall first mention (he says) a circumstance which has particularly forced itself upon my notice in the course of our various attempts to penetrate through the ice in these regions, which is, that the eastern coast of any portion of land, or, what is the same thing, the western sides of seas or inlets, having a tendency at all approaching to north and south, are, at a given season of the year, generally more encumbered with ice than the shores with an opposite aspect. The four following instances (he continues) may be adduced in illustration of this fact, and can not but appear somewhat striking when considered in viewing a map which exhibits the relative position of the shores in question."—P. 176.

The four instances he gives are generally known, and

admitted to be as he says. First, in the Northern Sea, from lat. 60° to 80°, bounded on the east by Lapland and Spitzbergen, and on the west by Greenland, the whole of the latter coast is blocked up by ice throughout the summer, so as to make it at least a matter of no easy enterprise to approach it, while the navigation of the eastern portion of that sea is annually and without difficulty performed by whalers and others.

The second instance is equally well known in the navigation of Davis's Strait, which, from about Resolution Island in 61½°, to the parallel of 70°, is inaccessible as late as the month of August, while the sea is open on the eastern side of the strait (the *western* coast of Greenland) many weeks before that time.

The third he mentions is his own case, when coasting the eastern shore of Melville Peninsula, on his first voyage, so loaded with ice as to make the navigation difficult and dangerous.

The fourth instance mentioned by Parry is the eastern side of Fox's Channel, where, from that navigator's account in 1631, and that of Baffin in 1615, "as from our own observation," there is little or no ice during the summer season; but he might also have added that the eastern coast of Southampton Island appears to be always choked with ice.

The fourth and last instance of the same kind, "which," says Parry, "I shall mention, is that of Prince Regent's Inlet, and of which the events of this and a former voyage furnish too striking a proof, the ice appearing always to cling to the western shore in a very remarkable manner, while the opposite coast is comparatively free from it."

And a fifth, on account of the accumulation of ice, may be added to the list, by mentioning the southern and eastern coast of Melville Island, whose shores appear to be the receptacle of all the ice that is driven eastward from the western sea, of which it is supposed to be the outermost barrier island; at least Sir John Franklin, from the view he had on the southern coast, thinks it to be so.

Captain Parry is not a man to act hastily or indiscreetly, and it would appear that the preference given to the

western coast was influenced, partly at least, by an ardent desire of acquiring an accession to the geographical knowledge of a strait or inlet which he had reason to believe would conduct him into the Polar Sea, through which he conceived the sought-for passage to the Pacific could best be made; for he says: "It was the general feeling at this period (24th of July) among us, that the voyage had but now commenced. The labors of a bad summer, and the tedium of a long winter, were forgotten in a moment, when we found ourselves upon ground *not hitherto explored*, and with every apparent prospect before us of making as rapid a progress as the nature of this navigation will permit toward the final accomplishment of our object." The trending of the western shore to the westward might also have contributed to the choice of that side; the only surprise is, that after the cases he has given, all of them adverse to it, he should have resolved to adopt it.

The ships continued to proceed southerly close in with the western shore, having alternately open water and floating ice, to which they had occasionally to make fast. On the 28th the ice was observed to be in rapid motion toward the shore. The Hecla was immediately beset, in spite of every exertion; and after breaking two of the largest ice-anchors in endeavoring to heave in to the shore, was obliged to drift with the ice. On the 29th the ships were so close in with the shore, that, after shifting the Hecla into "*a less insecure berth*," Parry says "he walked to a broad valley facing the sea near us." The cliffs next the sea, four or five hundred feet in perpendicular height, were continually breaking down; and "the ships lay so close to the shore as to be almost within the range of some of these tumbling masses, there being at high water scarcely beach enough for a person to walk along the shore."

On the 30th of July the Hecla's berth was shifted to a greater distance from the shore, by which Parry says "the security of the ship was much altered for the worse;" the Fury remained where she was, "there being no second berth even so good as the bad one where she was now lying." On the 31st it blew a hard gale, which brought the ice closer and closer, till it pressed

with very considerable violence on both ships, "though the most upon the Fury, which lay in a very exposed situation." The Hecla had only two or three hawsers broken. Early the next morning (the 31st) Commander Hoppner sent to inform Captain Parry that the Fury had been forced on the ground, where she still lay, but that she would probably be hove off without much difficulty at high water, provided the external ice did not prevent it.

A broad channel of water appearing at a little distance, and a fresh breeze springing up, the ships were cast, and their heads the right way, to reach this channel, when the ice came bodily in upon the ships, which were almost instantly beset, and in such a manner "as to be literally helpless and unmanageable." Captain Parry observes that, in such cases, "the exertions made by heaving at hawsers, or otherwise, are of little more service than in the occupation they furnish to the men's minds under circumstances of difficulty; for when the ice is fairly acting against the ship, ten times the strength and ingenuity could in reality avail nothing."

The body of ice setting to the southward, the two ships were carried with it to some short distance, when the Hecla, after thus driving about a mile, quite close to the shore, struck the ground forcibly several times, and being brought up by it, remained immovable. The Fury, continuing to drive, "was now irresistibly carried past us, and we escaped, only by a few feet, the damage invariably occasioned by ships coming in contact under such circumstances." She drove about three hundred yards, the ice pressing her on as well as along the shore, when she received a severe shock from a large floe-piece, forcing her directly against a grounded mass of ice upon the beach. The Hecla and Fury continued both aground, the latter, by Hoppner's report, so severely "nipped" and strained as to leak a good deal, and that she was heavily pressed both upon the ground and against the huge mass of ice. Both ships, however, got off at high water; but on the night of the second of August the ice once more forced the Fury on shore, and the Hecla narrowly escaped.

"I rowed on board the Fury," says Parry, "and

found four pumps constantly going to keep the ship free, and Commander Hoppner, his officers and men, almost exhausted with the incessant labor of the last eight-and-forty hours." The two commanders set out in a boat to survey the shore to the southward, in search of a place where the Fury, unable to proceed any farther without repairs, might be hove down, ruinous as such a necessity must be. At about a mile farther down they found a place where three grounded masses of ice had three to four fathoms water within them, and which, with the assistance of art, might afford something like shelter. On returning, the ice had closed in, so as not only to prevent their moving, but that the smallest external pressure must inevitably force them ashore, neither ship having more than two feet of water to spare. They were, however, soon relieved, and both ships enabled to proceed to the place of the three bergs, where the formation of a basin was commenced, and completed by the 16th of August; all the Fury's stores, provisions, and other articles were landed, and she was hove down on the 18th. A gale of wind, however, destroyed the bergs, and made it necessary for both ships to be towed out into the sea, or, rather, the ice. The Fury was reloaded, but on the 21st this unfortunate ship was again driven on shore.

As every farther attempt to put her into a state of repair was now hopeless, Parry, after visiting her for the last time, says, "every endeavor of ours to get her off, or, if got off, to float her to any known place of safety, would be at once utterly hopeless in itself, and productive of extreme risk to our remaining ship." A survey, therefore, was held upon her; and Commander Hoppner, with the other officers, were of opinion "that an absolute necessity existed for abandoning the Fury:" "my own opinion," says Parry, "being thus confirmed as to the utter hopelessness of saving her, and feeling more strongly than ever the responsibility which attached to me of preserving the Hecla unhurt, it was with extreme pain and regret that I made the signal for the Fury's officers and men to be sent for their clothes, most of which had been put on shore with the stores."

The incessant labor, the constant state of anxiety, and the frequent and imminent danger into which the

surviving ship was thrown, in the attempts to save her comrade, which were continued for five-and-twenty days, destroyed every reasonable expectation hitherto cherished of the ultimate accomplishment of this object. "I was therefore," says Parry, "reduced to the only remaining conclusion that it was my duty, under all the circumstances of the case, to return to England, in compliance with the plain tenor of my instructions. As soon as the boats were hoisted up, therefore, and the anchor stowed, the ship's head was put to the northeastward, with a light air off the land, in order to gain an offing before the ice should again set in-shore."

A breeze springing up on the 27th from the northward, immediate advantage was taken of it to stretch over to the eastern shore of Prince Regent's Inlet, which was done with scarcely any obstruction from ice, and the Hecla entered Neill's Harbor (a little to the southward of Port Bowen) in order to prepare her completely for crossing the Atlantic. Here one man, John Pages, seaman of the Fury, departed this life, having been for several months affected with a scrofulous disorder, the only case which proved fatal in either ship.

All being ready, and the water clear of ice, the Hecla weighed, and stood out to sea on the last day of August. On the first of September she entered Barrow's Strait, the sea there perfectly open, by which they were enabled to bear away to the eastward. In crossing Lancaster Sound they observed a more than usual quantity of icebergs, being in proportion of at least four to one that they had ever before observed there. They entered Baffin's Bay, still in an open sea. On the 7th of September they had reached the latitude of 72° 30′, having, in the course of eighty miles, only made a single tack, when they came to the margin of the ice, and got into an open sea on its eastern side. At this time there were thirty-nine bergs in sight, "and some of them certainly not less than 200 feet in height." On the 10th of October they made Mould Head, near the northwest end of the Orkney Islands. Captain Parry landed at Peterhead on the 12th, and arrived at the Admiralty on the 16th; the Hecla at Sheerness on the

20th of October, and was paid off at Woolwich on the 21st of November.

This last attempt for the discovery of a northwest passage, it must be admitted, is the least successful of the three that Captain Parry has now made, not merely as to any information regarding the passage, but as to any extension of geographical knowledge or of natural history. Of all the Arctic countries visited by him, the two shores of Prince Regent's Inlet are the most naked and barren, the most dreary and desolate, that have been seen, not excepting even Melville Island — not merely desolate of human beings, but almost deprived, also, of all animal and vegetable life; a gloomy, sad, and melancholy land. "We have scarcely," says Parry, "ever visited a coast on which so little of animal life occurs. For days together only one or two seals, a single sea-horse, and now and then a flock of ducks, were seen." An exception, however, occurred in the numberless kittiwakes flying about, and some hundreds of white whales sporting about the place where the Fury was abandoned.

The transient view which was taken of Prince Regent's shores on the first voyage was favorable enough to impress on the mind of Parry, on the failure of his second voyage, that to get fairly into the Polar Sea, "there is no *known* opening which seems to present itself so favorably for this purpose as Prince Regent's Inlet." And he repeats, in the voyage now under consideration, "to that point, therefore, I can, in the present state of our knowledge, have no hesitation in still recommending that any future attempt should be directed." His advice was followed, and a second ship was left behind. A third, it is to be hoped, will never again attempt this vile inlet, even although it has since been ascertained, from another quarter, that its waters do communicate with the western portion of the Polar Sea; such communication, however, gives no encouragement for ships of any size to make the trial of a passage into the Polar Sea by this route; but more of this hereafter.

An indifferent person, who has but carelessly glanced over the three expeditions, or another who has studied

and taken an interest in the subject, would most probably come to a different opinion from Captain Parry, and be disposed to think that, in any farther search for a northwest passage, the Strait of the Fury and Hecla and the Prince Regent's Inlet should equally be avoided, for, leading into one another, they may be considered as one and the same thing, and alike unfavorable to safe navigation. The additional encouragement which Parry says has been afforded by the favorable appearances of a navigable sea near the southwestern extremity of Prince Regent's Inlet, if it had any existence beyond appearances, might certainly lead to the conclusion that the northern coast of America could be approached by that route; but neither Parry at this time, nor indeed any one, being at all aware of what the American coast consisted of, with its sea encumbered with ice and islands, and navigable only by boats or canoes, could have been of a very different opinion. Franklin and Richardson, Dease and Simpson, have now fully acquainted us with the nature of that coast. It is true it is a *continuous* coast from the bottom of Regent's Inlet, and therefore falls in with the settled opinion of Captain Parry, who says "he is more than ever impressed with the belief that the only way in which a ship can, with tolerable certainty, succeed in penetrating any considerable distance, is by watching the openings occasionally produced by winds and tides between a body of ice when detached and movable, and some land *continuous* in the same direction."

This passage was written on the second voyage, and remains, he says, wholly unaltered in the present, which is the more remarkable, after the constant and imminent danger to the two ships, and the total loss of one of them, while struggling to make way along continuous land, between which and masses of ice, always in motion, they were to make their progress. It is difficult to imagine how a ship at anchor, or loose, placed near the shore on which large masses of ice are thrown, capriciously it may be said, for it is never known to what point they may be directed, can possibly escape destruction, especially among straits and narrow passages between islands. Suppose a person of ordinary intellect

should be told, as Captain Parry will tell him, that during the time his ships were made fast on the dangerous coast which has been spoken of, "the ice was setting to the southward, and sometimes at a rapid rate, full seven days out of every ten," would not such a person naturally ask, why was advantage not taken of such an auxiliary when going in the right direction? Captain Parry has replied to such a question.

"On numerous occasions the ships might easily have been placed among the ice, and left to drift with it, in comparative, if not absolute security, where the holding them on has been preferred, though attended with hourly and imminent peril. This was precisely the case on the present occasion; the ships might certainly have been pushed into the ice a day or two or even a week beforehand, and thus preserved from all risk of being forced on shore; but where they would have been drifted, and where they would have been again disengaged from the ice, or at liberty to take advantage of the occasional openings in-shore (by which alone the navigation of these seas is to be performed with any degree of certainty), I believe it impossible for any one to form the most distant idea."—P. 148.

It will, perhaps, be considered indiscreet in a landsman to question the opinion of one of such great nautical skill, and so well experienced in the navigation of seas hampered with ice, whose exertions have been so honorable to himself and satisfactory to his employers; but he is of too liberal a nature to take amiss, on a matter of fact, what is well meant, however it may differ from his own opinion. Fully persuaded that none can rise from the perusal of his "Northern Voyages" without being impressed with a decided conviction that his merits as an officer and scientific navigator are of the highest order; that his talents are not confined to his professional duties, but that the resources of his mind are equal to the most arduous situations, and fertile in expedients under every circumstance, however difficult, dangerous, or unexpected—such a man may safely venture, not merely to tolerate, but even to invite criticism, when candidly, honestly, and faithfully offered. Parry's heart still continues to cling to the accomplishment of a northwest passage, and most undoubtedly would put in practice such measures as, in his opinion and experi-

ence, he considers most likely to attain that object. He says:

"I feel confident that the undertaking, if it be deemed advisable at any future time to pursue it, will one day or other be accomplished; for, setting aside the accidents to which, from their very nature, such attempts must be liable, as well as other unfavorable circumstances which human foresight can never guard against nor human power controll, I can not but believe it to be an enterprise well within the reasonable limits of practicability. It may be tried often, and often fail, for several favorable and fortunate circumstances must be combined for its accomplishment; but I believe, nevertheless, that it *will* ultimately be accomplished."—P. 184, 185.

He goes on to say, "I am much mistaken indeed if the northwest passage ever becomes the business of a single summer; nay, I believe that nothing but a concurrence of very favorable circumstances is likely even to make a single *winter* in the ice sufficient for its accomplishment. But this is no argument against the possibility of final success; for we now know that a winter in the ice may be passed not only in safety, but in health and comfort." This is very true, at least in his own particular case, who had so many resources at his command; and no objection can be raised on the additional expense in wear and tear, in provisions and stores, and in the double pay of officers and men, except by that particular class of persons known by the name of utilitarians; the liberal-minded would not consider the increased expense thrown away when the honor of the nation, the interests of science, the improvement of navigation, and the employment of our rising officers and best seamen, are the objects contemplated.

While on this point, it is too remarkable a circumstance to be omitted, that none of our early navigators in the Polar regions ever passed a winter there, and rarely lost one of their small and fragile barks of 50, 40, 30, and down to 15 tons. Parry takes occasion to bestow a well-deserved testimony to the valuable, persevering, and extraordinary labors of these men.

"I should be doing but imperfect justice to the memory of these extraordinary men, as well as to my own sense of their merits, if I permitted the present opportunity to pass without

offering a still more explicit and decided testimony to the value of their labors. The accounts of Hudson, Baffin, and Davis (and first of all, Frobisher) are the productions of men of no common stamp. They evidently relate things just as they saw them, dwelling on such nautical and hydrographical notices as, even at this day, are valuable to any seaman going over the same ground, and describing every appearance of nature, whether on the land, the sea, or the ice, with a degree of faithfulness which can alone, perhaps, be duly appreciated by those who succeed them in the same regions and under similar circumstances. The general outline of the lands they discovered was laid down by themselves with such extraordinary precision, even in longitude, as scarcely to require correction in modern times; of which fact the oldest maps now extant of Baffin's Bay and the Straits of Hudson and Davis, constructed from the original materials, will afford sufficient proof. The same accuracy is observable in their accounts of the tides, soundings, and bearings, phenomena in which the lapse of 200 years can have wrought but little change. It is, indeed, impossible for any one personally acquainted with the phenomena of the icy seas to peruse the plain and unpretending narratives of these navigators without recognizing in almost every event they relate some circumstance familiar to his own recollection and experience, and meeting with numberless remarks which bear most unequivocally about them the impress of truth.

"While thus doing justice to the faithfulness and accuracy with which they recorded their discoveries, one can not less admire the intrepidity, perseverance, and skill with which, inadequately furnished as they were, those discoveries were effected, and every difficulty and danger braved. That any man, in a single frail vessel of five-and-twenty tons, ill found in most respects, and wholly unprovided for wintering, having to contend with a thousand real difficulties, as well as with numberless imaginary ones, which the superstitions then existing among sailors would not fail to conjure up—that any man, under such circumstances, should, two hundred years ago, have persevered in accomplishing what our old navigators did accomplish, is, I confess, sufficient to create in my mind a feeling of the highest pride on the one hand, and almost approaching to humiliation on the other; of pride, in remembering that it was *our* countrymen who performed these exploits; of humiliation, when I consider how little, with all our advantages, *we* have succeeded in going beyond them.

"Indeed, the longer our experience has been in the navigation of the icy seas, and the more intimate our acquaint-

ance with all its difficulties and all its precariousness, the higher have our admiration and respect been raised for those who went before us in these enterprises. Persevering in difficulty, unappalled by danger, and patient under distress, they scarcely ever use the language of complaint, much less that of despair; and sometimes, when all human hope seems at its lowest ebb, they furnish the most beautiful examples of that firm reliance on a merciful and superintending Providence which is the only rational source of true fortitude in man. Often, with their narratives impressed upon my mind, and surrounded by the very difficulties which they in their frail and inefficient barks undauntedly encountered and overcame, have I been tempted to exclaim, with all the enthusiasm of Purchas, 'How shall I admire your heroicke courage, ye marine worthies, beyond names of worthiness!'"—P. 181, 182, 183.

This is the third and last attempt of Captain Parry to discover a northwest passage from the Atlantic to the Pacific, but it is by no means his last attempt at Polar discovery; it has, in fact, been followed up with an enterprise not more novel than perilous—an attempt to approach the North Pole, in which he will again appear, in the present narrative, in that bold and fearless character, which, if it fail of complete success, will at least most unquestionably have deserved it.

It may not be amiss, in closing the narrative of this voyage, to insert a few desultory remarks chiefly from the Appendix. During the winter months in which the ships were shut up in Bowen's Harbor, the respective officers employed themselves in collecting and arranging the observations that were made in the course of the voyage,* down to the period of their release, a very brief extract from which must here serve. It is almost unnecessary to say that all astronomical observations connected with navigation were strictly attended to by the commander of the expedition and his colleague Hoppner, by Lieutenants Foster, Sherer, Ross, and by Mr. Hooper, as observations for determining the longitude:

By occultations of fixed stars.
By fixed stars and the Moon—Foster.

* There is no Appendix in the Second Voyage: the collections of natural history, and certain of the observations, are included in the present one.

By transit of the Moon—Foster.
By Jupiter's satellites—Foster.
Magnetic dip of needle—Parry and Foster.
Variation—Parry and various officers.

The Board of Longitude having suggested that one of the objects of the present voyage should be the determination of the figure of the earth, by means of the vibration of a pendulum, the apparatus of Captain Henry Kater's construction was supplied to the expedition, and placed in charge of Lieutenant Henry Foster. As it was necessary that the number of vibrations of the same pendulum should be known at different places, Mr. Pond, the Astronomer Royal, allowed the trial to be made at Greenwich. The results of the experiments, as stated by Lieutenant Foster, give briefly—

Number of vibrations at Greenwich . .	86,159,434
Ditto at Port Bowen . .	86,230,242
Length of seconds' pendulum in the latitude of Greenwich	39·13911 inches.
Ditto at Port Bowen	39·203468 do.

Whence, Mr. Foster says, the fraction expressing the diminution of gravity from the pole to the equator is 0054155, and

The ellipticity of the earth, $\frac{1}{209{\cdot}16}$.
That of the French geometricians, $\frac{1}{306{\cdot}75}$.
Sabine from the north, $\frac{1}{289{\cdot}1}$.
Sabine, Melville Island, $\frac{1}{312{\cdot}6}$

From Lieutenant James Clarke Ross the Appendix contains a brief account of the quadrupeds, birds, fishes, and insects, and invertebrate animals. There is also an account by Sir William Hooker of the plants found in the course of this voyage. These may be briefly stated as under, embracing both east and west coast of this portion of America.

Quadrupeds.—The Polar Bear—Arctic Fox—Lemming—Polar Hare—Reindeer—Rough Seal—Black Whale—Narwhal.

Birds.—Iceland Falcon—Snowy Owl—Raven—Lapland Finch—Snow-Bunting—Ptarmigan—Rock Grouse—Willow Partridge—Golden Plover—Phalarope, 2 species—Gulls, 6

species—Eider Ducks, and varie as others—Little Auk, and 2 others.

Fishes.—Ophidium, 2 species- -Cottus, 2 species—Pleuronectes, not very numerous.

Insects.—12 species, 4 of them Spiders, 1 Bee, 1 Ant, 1 Gnat, 1 Butterfiy; the other four are Simulium, Ctenophoræ, Bombus, and Bombyx.

The *Invertebrate* animals, which are numerous, and not of very familiarized names in Latin, may be passed over.

The Botany of the last two voyages, by Sir William Hooker, embraces 21 families of the natural order, but, as he observes, "a small number of species, owing to the few opportunities that were afforded for the officers to go on shore, as well as to the extreme poverty of the soil in those places that were visited."

Of the notes on the geology of the countries visited, in the second and the present voyage, by Professor Jameson, who also gives a few concluding remarks on the geology of the four Arctic Expeditions, a brief abstract is as follows:

1. That the regions explored abound in primitive, transition, and secondary rocks; partial alluvial deposits; modern volcanic rocks not met with; few traces of tertiary strata.

2. That primitive and transition islands at one time probably connected, and formed a mass with the continent of America, in the plains and hollows of which were deposited the secondary limestones, sandstones, gypsum, and coal; on these, again, the tertiary rocks.

3, 4, 5. Purely speculative.

6. The bowlders or rolled blocks afford evidence of the passage of water across the places where found.

7. No traces of the agency of modern volcanoes any where except in Jan Mayen s Island.

8. No intimations of olde volcanic action, except in the presence of secondary t ap rocks, such as basalt, greenstone, trap tufa, and amy gdaloid.

9. That black bituminous coal (the oldest formation) found in Melville Island and in Old Greenland, forms an interesting feature in the geognostical constitution of Arctic countries.

10. That the red sandstone of Possession Bay, &c., renders it probable that rock salt may occur in that quarter.

11. That the regions explored by Captain Parry have afforded various interesting and highly useful ores, such as octahedral, or magnetic iron ore; rhomboidal, or red iron ore; prismatic, or brown iron ore; and chromate of iron; also the common ore of copper, or copper pyrites, and sulphuret of molybdæna; ore of titanium, and that valuable mineral, graphite, or black-lead.

12. That gems are not wanting in the Arctic regions is proved by the abundance of the precious garnet, which, on more particular examination of the primitive rocks, will no doubt be found to present all the beautiful colors and elegant forms for which that stone is so much admired. Rock crystal, beryl, and zircon have also been met with.

13. That these countries exhibit the same general geognostical arrangements as occur in other countries examined by the naturalist; "a fact," says the professor, "which strengthens that opinion, which maintains that the great features of nature in the mineral kingdom are every where similar, and consequently that the same general agencies must have prevailed generally during the formation of the solid mass of the earth."

14. And Professor Jameson concludes his remarks in the 14th paragraph with a general observation, so beautifully expressed in language, and so true in substance, that it would be well worth the attention of the modern physiologist, with his *new creations* springing out of *fiery mists*, to leave his unsubstantial visions, and imitate the professor's creed,

"That the apparent irregularities which at first sight present themselves to our attention in the grand arrangements in the mineral kingdom are the offspring of our own feeble powers of observation, and disappear when the phenomena are examined in all their relations. It is then, indeed, that the mind obtains those enduring and sublime views of the power of the Deity, which, in geology, reward the patient observer, raise one of the most beautiful and interesting departments of natural science to its true rank, and prove that its relations connect, as it were, in the scale of magnitude, the phenomena of the earth with those more ex-

tensive arrangements presented to our intelligence in the planetary system, and in the grand framework of the universe itself."—App., p. 151.

Captain Parry, in observing on the extreme facility with which sounds are heard at considerable distances in severely cold weather, relates a circumstance that occurred at Port Bowen in confirmation of the fact. "Lieutenant Foster having occasion to send a man from the observatory to the opposite shore of the harbor, a measured distance of 6696 feet (about a mile and two tenths), in order to fix a meridian mark, had placed a second person half way between, to repeat his directions; but he found, on trial, that this precaution was unnecessary, as he could without difficulty keep up a conversation with the man at the distant station. The thermometer at the time was 18°; the barometer, 30·14 inches; weather calm, clear, and serene."

The Aurora is stated to have appeared forty-seven nights from October to March, fifteen times in January, five in March, and two in October. Nothing particular is said of its appearance, and no one ever heard any sound produced. The Aurora had no effect on the variation needles, which were *suspended* (not *supported*) in the most delicate manner.

The atmosphere during the winter months is stated to have been favorable to the excitement of electricity; but none could be made apparent, though Parry says the electrometer with gold leaf was applied to the chain, which was attached to the mast head by glass rods, the upper link, above the mast head, being 115 feet above the level of the sea; but it was without the slightest perceptible effect.

A word on the difference of temperature, and of the different quantities of ice on the east and west shores of continents, islands, or straits: a well-known fact, but which does not appear to have been satisfactorily explained—why the western coasts of continents and islands, of straits and inlets, should be less subject to be hampered with ice than the eastern ones? The fact is decidedly so, as many instances, in addition to those mentioned by Captain Parry, might be given. If the easterly winds were the most prevalent and powerful,

the floes and masses of ice would no doubt be driven by them to the easterly coast; but it would rather appear that within the Arctic Circle the northerly and westerly winds mostly prevail. The same thing obtains with regard to temperature, whether on the coasts of continents or islands, or even in the broad streets of towns, lying in a north and south direction. Thus, on the western coast of America, up as far as Cook's River, between the latitude of 55° and 60°, the little certhias and the humming-birds are said to be chirping and singing, when from Newfoundland in 50°, down to Philadelphia in 40°, frost and snow cover the water and the ground. At home, the difference of temperature between the western coast or islands of Scotland and the eastern coast is so great, that the late Lady Bute found the Isle of Bute more congenial with her constitution than even England. The coast of Devonshire is of a much milder temperature than the coast of Norfolk. On the same principle, the east side of Regent-street, facing the west, will always be found more dry and free from moisture than the opposite side, facing the east; and so will the east side of Regent's Park be more dry, and the houses more free from moisture, than on the western side.

From what cause does this proceed? May it not be explained by the fact that, at or a little before sunrise, the temperature of the atmosphere is much lower than at or a little after sunset, and that, from the former period to the meridian, the influence of the sun is considerably less than from the meridian to the latter; in other words, that the power of the sun during the first half of the day, when his rays pass over the eastern land, is much less than when he is pouring his beams on the western land for the second half of the day? If it be conceded that the setting sun shedding its rays on a western coast creates a more warm or mild temperature than is felt by the more oblique rays at the same time shed on the eastern land, perhaps it may assist to solve the problem; but the difference is not so great as to explain the cause of the permanently-fixed ice, for instance, on the east coast of Greenland, or of Southampton Island, and many other coasts running north and south.

"These facts, when taken together," Parry says,

"have long ago impressed me with an idea that there must exist in the Polar region some general motion of the sea toward the west, causing the ice to set in that direction when not impelled by contrary winds, or local and occasional currents, until it butts against those shores which are actually found to be most encumbered by it;' and he gives instances of ships being set to the westward in opposition to a strong wind blowing from that quarter; and, having stated the facts, he concludes by suggesting, for the consideration of others, whether such a tendency of the sea as that noticed may not have some connection with the motion of the earth on its axis. Such an idea, it is apprehended, is not tenable, as it is generally understood that the motion of the earth carries with it both the sea and the atmosphere.

CHAPTER IX.

PARRY'S POLAR VOYAGE.

1827.

Narrative of an Attempt to reach the North Pole in the Year 1827. By Captain W. E. PARRY.

WHEN it is considered that Captain Parry, since the year 1818, has made four voyages into the Arctic Seas, and has passed four winters in the ice, and that we now find him again coming forward in the year 1827 (having but just returned from his last voyage), and proposing to Lord Melville a plan of an attempt to reach the North Pole by means of traveling with sledge-boats over the ice,* or through any spaces of water that might occur, this daring attempt brings back to our recollection the extreme sufferings of Franklin and Richardson on their first journey to the shores of the Polar Sea, which did not deter them from immediately setting out a second time—when it is farther considered that Franklin is now on a voyage in search of a northwest passage, and

* He adds in a note, "This plan, as originally proposed by Captain Franklin, was given to me by Mr. Barrow soon after my return from the expedition of 1824–5."

add to these the indefatigable labors of Sir James Clarke Ross, who has passed seven or eight winters of his life in the ice, having recently returned from a three years' expedition into the Antarctic Ocean—when these several cases are prominently brought before us, the only conclusion to be arrived at is this, that the desire for distinction, and the confident hope of meriting it by some new discovery, overpower every apprehension of danger or difficulty, being satisfied that they possess resources within themselves, and a sufficient stock of moral courage to struggle against and to conquer both difficulty and danger. There is also something inviting to a seaman's mind in exploring new countries, which is not the less relished by the access to them being beset with obstacles which to overcome must sometimes require extreme suffering, and even the sacrifice of life.

The enterprise about to be described had plenty of novelty, difficulty, and danger to recommend it; but Parry was not a man to rush headlong into a novel and perilous scheme without making inquiry into its nature. On consulting Phipps's voyage of 1773, he finds Captain Lutwidge describing the ice for ten or twelve leagues as "one continued plain of smooth, unbroken ice, bounded only by the horizon." Mr. Scoresby's account was stronger still. "I once saw," he says, "a field that was so free from either fissure or hommoc, that I imagine, had it been free from snow, a coach might have been driven many leagues over it in a direct line, without obstruction or danger." Great encouragement these reports certainly afforded for the progress of a sledge-borne boat. Captain Parry, however, adds a farther stimulus—that his hopes of success were principally founded on the proposition that had been made by his friend and brother-officer, Captain Franklin, who had himself volunteered to conduct it.

Two boats were specially constructed for this purpose, twenty feet long and seven broad, flat-floored, and built as stout as wood and iron could make them, and so fitted as to contain nautical and other instruments, bags of biscuit, pemmican, spare clothing, and a variety of smaller stores, chiefly provisions. "A bamboo mast nineteen feet long, a tarred duck sail, answering also the

purpose of an awning, a spreat, one boat-hook, fourteen paddles, and a steer-oar, completed each boat's complement." Two officers and twelve men (ten of them seamen and two marines) were selected for each boat's crew. Each boat, with all her furniture, tools, instruments, clothing, and provisions of every kind, weighed 3753 pounds, being 268 pounds in weight for each man, exclusive of four sledges, weighing 26 pounds each.

"My own impartial conviction," says Parry, "at the time of setting out on this enterprise, coincided (with a single exception) with the opinion expressed by the Commissioners of Longitude in their memorial to the king, that "the progress of discovery had not arrived northward, according to any well-authenticated accounts, so far as 81° of north latitude." The exception he alludes to is in favor of Mr. Scoresby, who states his having, in the year 1806, reached the latitude of 81° 12′ 42″ by actual observation, and 81° 30′ by dead reckoning. "I therefore consider," says Parry, "the latter parallel as, in all probability, the highest which had ever been attained prior to the attempt recorded in the following pages."

When all was ready, Captain Parry was appointed to the command of H.M. sloop Hecla, with instructions to proceed in her to Spitzbergen, to place her in some safe harbor or cove, and, leaving her in charge of Lieutenant Foster, to proceed with the boats directly to the northward, using his best endeavors to reach the North Pole; to be careful to return to Spitzbergen before the winter sets in, and early enough in the autumn to insure the Hecla not being frozen up and obliged to winter there. He was to direct Lieutenant Foster to survey the northern and eastern coasts of Spitzbergen in his absence. The officers attached to the Hecla were Lieutenants Foster and Crozier, the former a most distinguished scientific navigator, who, as already said, lost his life on the Isthmus of Panama; the latter now captain of the Terror, on the existing voyage of Sir John Franklin, having been the second in command to Captain James Ross in the South Pole Expedition. Lieutenant James Ross, on the present voyage, commanded the second boat.

On the 4th of April, 1827, the Hecla weighed anchor

and made sail from the Nore, and on the 19th arrived at Hammerfest, where they were to receive on board eight reindeer, with a supply of moss (*Cenomyce rangiferina*) for their provender. Here Parry gleaned some instructions for the management of the deer.

"Nothing can be more beautiful than the training of the Lapland reindeer. With a simple collar of skin round his neck, a single trace of the same material attached to the pulk or sledge, and passing between his legs, and one rein fastened like a halter round his neck, this intelligent and docile animal is perfectly under command of an experienced driver, and performs astonishing journeys over the softest snow. When the rein is thrown over on the off-side of the animal, he immediately sets off at full trot, and stops short the instant it is thrown back to the near side. Shaking the rein over his back is the only whip that is required."—P. 6.

The quantity of *clean* moss, per day, for each deer, is stated to be four pounds, but they go five or six days without provender, and without suffering materially. Snow is to them the best kind of water, and ice a comfortable bed. It may well be imagined how valuable such animals were likely to be to the party; and Parry observes, that "the more we became accustomed, and, I may say, attached to them, the more painful became the idea of the necessity which was likely to exist, of ultimately having recourse to them as provisions for ourselves."

On the 14th of May the Hecla rounded Hakluyt's Headland, and met with such a tremendous gale of wind and gusts from the high land as almost to lay the ship on her beam ends, and oblige them to reduce the canvas to the main-topsail and stormsails, and let her drive to leeward. Parry suggests it might have been such a storm as this that gave the name of this headland, in an old Dutch chart, the *Duyvel's Hoek*. From this time till the embarcation in boats, which did not take place till after "a close and tedious 'besetment' of twenty-four days," that is, from the 14th of May till the 8th of June, may be looked on as so much lost time. Indeed, after being released, it required a long, anxious, and tedious search for a properly secure harbor in which to leave the Hecla, where she might conveniently be found on the

return of the boats from the northward. Such a spot was at length discovered.

"On the evening of the 18th of June, while standing in for the high land to the eastward of Vorlegen Hoek, which, with due attention to the land, may be approached with safety, we perceived from the crow's-nest what appeared a low point, possibly affording some shelter for the ship, and which seemed to answer to an indentation of the coast laid down in an old Dutch chart, and there called *Treurenburg Bay*;" and a fine sheltered bay they found it; they warped in the Hecla with the greatest alacrity, and dropped anchor in *Hecla Cove* in thirteen fathoms.

The neighborhood of this bay, like most of the northern shores of Spitzbergen, appeared to have been much visited by the Dutch at a very early period, of which circumstance records were furnished at almost every spot where the party landed, by the numerous graves they met with. Thirty of these were found on a point of land on the north side of the bay. The bodies had been generally deposited in oblong wooden coffins, not buried, but merely covered with large stones; a board near the head records the name of the deceased, the ship, her commander, and her date; one was so far back as 1690. Parry is right in supposing the name of the bay to be from *treuren*, to lament, on account of the mortality that has occurred there.

Having now made his final arrangements, and given proper directions to Lieutenants Foster and Crozier, Captain Parry left the ship with his two boats, which he named the Enterprise and the Endeavor, Mr. Beverley being attached to his own, and Lieutenant Ross, accompanied by Mr. Bird, in the other. As the season had so far advanced, he took only seventy-one days' provisions; and as it appeared highly improbable, from what had been seen of the very rugged nature of the ice they would first have to encounter, that "either the reindeer, the snow-shoes, or the wheels would prove of any service for some time to come, I gave up the idea of taking them. We, however, constructed out of the snow-shoes four excellent sledges for dragging a part of our baggage over the ice, which proved of invaluable service

to us, while the rest of the things just mentioned would only have been an encumbrance."

What became of those interesting little creatures, the eight reindeer, which were spoken of with a kind of affectionate regard, while it was hinted that the painful necessity might arise of having recourse to them as provision, is not stated. It was soon evident, indeed, from the appearance of the ice, that they could not be of the slightest use, but a great encumbrance in the boats: of their ultimate fate no mention is made in the narrative.

Lieutenant Crozier accompanied the boats as far as Walden Island, where a deposit of provisions was left, whence they proceeded to Little Table Island to examine and resecure the provisions that had been left there for their return. The prospect to the northward was favorable enough, only a small quantity of loose ice being in sight, the weather calm and clear, with the sea as smooth as a mirror; thus "we set off without delay, at half past ten, taking our final leave of the Spitzbergen shores, as we hoped, for at least two months. The walruses here were very numerous, lying in herds upon the ice, and plunging into the water to follow us as we passed. The sound they utter is something between bellowing and very loud snorting, which, together with their grim, bearded countenances, and long tusks, make them appear, as indeed they are, rather formidable enemies to contend with.

"Steering due north, we made good progress, our latitude, by the sun's meridian altitude at midnight, being 80° 51′ 13″. At noon the next day, after a run of two hours in open water, with a westerly wind, we were stopped by close ice, and obliged to haul the boats upon a small floe-piece, the latitude by observation being 81° 12′ 51″.

As this voyage is of so bold and daring a character, and in all its circumstances so novel and perfectly unique, no description of it, except in the words of the commander of the Enterprise himself, can convey to the reader an adequate idea of the arrangements and the management of it. The usual mode pursued by this gallant party on their adventurous voyage is thus described:

"Our plan of traveling being nearly the same throughout

this excursion, after we first entered upon the ice, I may at once give some account of our usual mode of proceeding. It was my intention to travel wholly at night, and to rest by day, there being, of course, constant daylight in these regions during the summer season. The advantages of this plan, which was occasionally deranged by circumstances, consisted, first, in our avoiding the intense and oppressive glare from the snow during the time of the sun's greatest altitude, so as to prevent, in some degree, the painful inflammation in the eyes called 'snow-blindness,' which is common in all snowy countries. We also thus enjoyed greater warmth during the hours of rest, and had a better chance of drying our clothes; besides which, no small advantage was derived from the snow being harder at night for traveling. The only disadvantage of this plan was, that the fogs were somewhat more frequent and more thick by night than by day, though even in this respect there was less difference than might have been supposed, the temperature during the twenty-four hours undergoing but little variation. This traveling by night and sleeping by day so completely inverted the natural order of things, that it was difficult to persuade ourselves of the reality. Even the officers and myself, who were all furnished with pocket chronometers, could not always bear in mind at what part of the twenty-four hours we had arrived; and there were several of the men who declared, and I believe truly, that they never knew night from day during the whole excursion.*

"When we rose in the evening, we commenced our day by prayers, after which we took off our fur sleeping-dresses, and put on those for traveling; the former being made of camlet, lined with racoon skin, and the latter of strong blue box-cloth. We made a point of always putting on the same stockings and boots for traveling in, whether they had dried during the day or not; and I believe it was only in five or six instances, at the most, that they were not either still wet or hard frozen. This, indeed, was of no consequence beyond the discomfort of first putting them on in this state, as they were sure to be thoroughly wet in a quarter of an hour after commencing our journey, while, on the other hand, it was of vital importance to keep dry things for sleeping in. Being

* "Had we succeeded in reaching the higher latitudes, where the change of the sun's altitude during the twenty-four hours is still less perceptible, it would have been essentially necessary to possess the certain means of knowing this, since an error of twelve hours of time would have carried us, when we intended to return, on a meridian opposite to, or 180° from, the right one. To obviate the possibility of this, we had some chronometers, constructed by Messrs. Parkinson and Frodsham, of which the hour-hand made only one revolution in the day, the twenty-four hours being marked round the dial-plate."

'rigged' for traveling, we breakfasted upon warm cocoa and biscuit, and after stowing the things in the boats and on the sledges, so as to secure them, as much as possible, from wet, we set off on our day's journey, and usually traveled from five to five and a half hours, then stopped an hour to dine, and again traveled four, five, or even six hours, according to circumstances. After this we halted for the night, as we called it, though it was usually early in the morning, selecting the largest surface of ice we happened to be near for hauling the boats on, in order to avoid the danner of its breaking up by coming in contact with other masses, and also to prevent drift as much as possible. The boats were placed close alongside each other, with their sterns to the wind, the snow or wet cleared out of them, and the sails, supported by the bamboo masts and three paddles, placed over them as awnings, an entrance being left at the bow. Every man then immediately put on dry stockings and fur boots, after which we set about the necessary repairs of boats, sledges, or clothes; and, after serving the provisions for the succeeding day, we went to supper. Most of the officers and men then smoked their pipes, which served to dry the boats and awnings very much, and usually raised the temperature of our lodgings 10° or 15°. This part of the twenty-four hours was often a time, and the only one, of real enjoyment to us; the men told their stories, and 'fought all their battles o'er again,' and the labors of the day, unsuccessful as they too often were, were forgotten. A regular watch was set during our resting-time, to look out for bears, or for the ice breaking up round us, as well as to attend to the drying of the clothes, each man alternately taking this duty for one hour. We then concluded our day with prayers, and having put on our fur dresses, lay down to sleep with a degree of comfort which perhaps few persons would imagine possible under such circumstances; our chief inconvenience being, that we were somewhat pinched for room, and therefore obliged to stow rather closer than was quite agreeable. The temperature, while we slept, was usually from 36° to 45°, according to the state of the external atmosphere; but on one or two occasions, in calm and warm weather, it rose as high as 60° to 66°, obliging us to throw off a part of our fur dress. After we had slept seven hours, the man appointed to boil the cocoa roused us, when it was ready, by the sound of a bugle, when we commenced our day in the manner before described.

"Our allowance of provisions for each man per day was as follows:

Biscuit	10 ounces.
Pemmican	9 "

Sweetened Cocoa Powder .	1 ounce to make one pint.
Rum	1 gill.
Tobacco	3 ounces per week.

Our fuel consisted entirely of spirits of wine, of which two pints formed our daily allowence, the cocoa being cooked in an iron boiler, over a shallow iron lamp, with seven wicks. We usually found one pint of the spirits of wine sufficient for preparing our breakfast, that is, for heating 28 pints of water, though it always commenced from the temperature of 32°. If the weather was calm and fair, this quantity of fuel brought it to the boiling point in about an hour and a quarter, but more generally the wicks began to go out before it had reached 200°. This, however, made a very comfortable meal to persons situated as we were. Such, with very little variation, was our regular routine during the whole of this excursion."—P. 55–59.

The party must have been grievously disappointed on finding the state of the ice wholly the reverse of what it had been represented before setting out. Instead of being a fine, smooth level plain, "over which a coach might have been driven many leagues;" instead of compact floes, it consisted entirely of small, loose, and rugged masses, obliging them "to make three journeys, and sometimes four, with the boats and baggage, and to lanch several times across narrow pools of water." And yet the descriptions given by Captain Lutwidge and Mr. Scoresby might be quite correct at the time, though now totally different, the condition of the ice varying from year to year. One day, we are told, during heavy rain, they advanced but half a mile in four hours. At another time, in thick weather, the ice was so much in motion as to make it dangerous to cross with loaded boats, the masses being so small. Another day they landed on a small floe, but "it proved so rugged that we were obliged to make three and sometimes four journeys with the boats and provisions, and this by a very circuitous route, so that the road by which we made a mile of northing was a full mile and a half in length, and over this we had to travel at least five, and sometimes seven times." In short, from the 25th, the day they started, to the 30th, it was found, by an observation at midnight, that they had reached no higher than 81° 23′, "so that

we had made only eight miles of northing since our last observation at noon on the 25th."

Captain Parry observes, that as the temperature by night and day was liable to little variation, some inconvenience was experienced with regard to noticing the time. To obviate any mistake which at or near the Pole might lead them, by taking the wrong twelve hours, to a meridian 180° from the intended one, they had some chronometers of which the hour-hand made only one revolution in the day, the twenty-four hours being marked round the dial-plate. (See page 203 and Note on this subject.)

The 1st of July brought them to no better ice; a few small floes occurred, with pools of water between them, the ice less broken up, and sometimes tolerably level; but six to eighteen inches of soft snow lying on the surface made the traveling very fatiguing, and obliged the party to undergo at least two, and sometimes three, journeys with their loads. On the boats *landing* on a floe-piece, Parry and Ross generally walked on ahead to select the easiest road for the boats to follow; the sledges came after them, by which the snow was trodden down, and made easier for the boats. What follows is too interesting to be omitted.

"As soon as we arrived at the other end of the floe, or came to any difficult place, we mounted one of the highest hommocs of ice near at hand (many of which were from fifteen to twenty-five feet above the sea), in order to obtain a better view around us; and nothing could well exceed the dreariness which such a view presented. The eye wearied itself in vain to find an object but ice and sky to rest upon; and even the latter was often hidden from our view by the dense and dismal fogs which so generally prevailed. For want of variety, the most trifling circumstance engaged a more than ordinary share of our attention; a passing gull, a mass of ice of unusual form, became objects which our situation and circumstances magnified into ridiculous importance; and we have since often smiled to remember the eager interest with which we regarded many insignificant occurrences. It may well be imagined, then, how cheering it was to turn from this scene of inanimate desolation to our two little boats in the distance, to see the moving figures of our men winding with their sledges among the hommocs, and to hear once more the sound of human voices breaking the stillness of this

icy wilderness. In some cases Lieutenant Ross and myself took separate routes to try the ground, which kept us almost continually floundering among deep snow and water. The sledges having been brought up as far as we had explored, we all went back for the boats; each boat's crew, when the road was tolerable, dragging their own, and the officers laboring equally hard with the men. It was thus we proceeded for nine miles out of every ten that we traveled over ice, for it was very rarely indeed that we met with a surface sufficiently level and hard to drag all our loads at one journey, and in a great many instances during the first fortnight we had to make three journeys with the boats and baggage; that is, to traverse the same road five times over."—P. 67, 68.

When they had the good fortune to reach a small floe, the snow on its surface was so deep, and the pools of water so frequent, that after a laborious day's work the distance traversed was perhaps two miles, and rarely exceeded five. The snow, moreover, was so soft as to take them up to the knee at almost every other step, and frequently still deeper, so that they were sometimes five minutes together in moving a single empty boat with all their united strength. The rain produced a greater effect on the snow than the sun. Parry says that Ross and himself, in their pioneering duty, were so frequently beset, that sometimes, after trying in vain to extricate their legs, they were obliged to sit down to rest themselves; and the men, in dragging the sledges, were often under the necessity of crawling on all fours to make any progress at all. In one place they were more than two hours in proceeding one hundred and fifty yards. Yet the men worked with cheerfulness and good will, hoping to reach the spot (though they had long passed it) where Captain Lutwidge found "one continued plain of smooth, unbroken ice, bounded only by the horizon."

One day of great fatigue, after stopping to empty their boots and wring their stockings, is thus spoken of:

"We halted for the night at half an hour before midnight, the people being almost exhausted with a laborious day's work, and our distance made good to the northward not exceeding two miles and a quarter. We allowed ourselves this night a hot supper, consisting of a pint of soup per man, made of an ounce of pemmican each, and eight or ten birds which

we had killed in the course of the last week; and this was a luxury which persons thus situated could perhaps alone duly appreciate. We had seen in the course of the day a few rotges, a dovekie, a loom, a mollemuck, and two or three very small seals."—P. 70.

On the 12th of July they had reached the latitude of 82° 14′ 28″; a brilliant day and clear sky overhead, "an absolute luxury to us." The pools and streams on the floes increased, and caused the men to make a very circuitous route. "If any thing could have compensated for the delay these occasioned us, it would have been the beautiful blue color peculiar to these super-glacial lakes, which is certainly one of the most pleasing tints in nature." The next day they were in latitude 82° 17′ 10″; no bottom with 400 fathoms of line; temperature of water brought up, 31°; of surface water, 32½°; of the ice, 33°; of the air, 36°. "On this day we saw," says Parry, "during this last journey, a mollemuck, and a second Ross gull; and a couple of *small flies* (to us an event of ridiculous importance) were found upon the ice," but whether living or dead is not recorded.

No improvement on the 14th, after five hours' unceasing labor; the progress was a mile and a half due north, though from three to four miles had been traversed, and ten at least walked, having made three journeys a great part of the way, lanched and hauled up the boats four times, and dragged them over twenty-five separate pieces of ice; no improvement in the traveling. "After more than eleven hours of actual labor on the 18th, requiring for the most part our whole strength to be exerted, we had traveled over a space not exceeding four miles, of which only two were made good." But this snail-like progress was not the worst that befell them; it was very small, but still it *was* progress. Now, however, the 20th of July, Parry says,

"We halted at 7 A.M., having by our reckoning accomplished six miles and a half in a N.N.W. direction, the distance traversed being ten miles and a half. It may therefore be imagined how great was our mortification in finding that our latitude by observation at noon was only 82° 36′ 52″, being less than *five* miles to the northward of our place at noon on the 17th, since which time we had certainly traveled *twelve* in that direction."—P. 94.

Under these discouraging circumstances, it was deemed prudent to avoid making the fact known to the men; at the same time, a very serious calamity was narrowly escaped: the floe on which they were broke under the weight of the boats and sledges, and the latter were nearly lost through the ice; some of the men, too, went through, but were providentially saved. On the 22d, however, the ice had considerably improved; the floes became large and tolerably level, and some good lanes of water occurring, it was calculated they had made between ten and eleven miles, and traversed a distance of about seventeen, after more than twelve hours' actual traveling, by which the people were extremely fatigued; "but while the work," says Parry, "seemed to be repaid by any thing like progress, the men labored with great cheerfulness to the utmost of their strength." It may readily be imagined that the improvement of the ice, and with it the increased progress, gave much satisfaction, though the encouraging prospect was but of short duration.

"In proportion, then, to the hopes we had begun to entertain, was our disappointment in finding at noon that we were in latitude 82° 43′ 5″, or not quite four miles to the northward of yesterday's observation, instead of the ten or eleven which we had traveled! However, we determined to continue to the last our utmost exertions, though we could never once encourage the men by assuring them of our making good progress; and setting out at seven in the evening, soon found that our hope of having permanently reached better ice was not to be realized, for the floe on which we slept was so full of hommocs that it took us just six hours to cross it, the distance in a straight line not exceeding two miles and a half."—P. 98, 99.

Such a result was disheartening enough to the officers, who knew to what little effect the struggles were made, of which, however, the men appeared to have no suspicion, though Parry says "they often laughingly remarked that 'we were a long time getting to this 83°.'" This was merely the point assumed, as they certainly had no suspicion that on their arrival at that point they would have been entitled to one thousand pounds.* But, had they known it, they could not have

* By order in council.

labored more earnestly than they did. In their slow advance to the northward, the ice became so small that a single piece only could be found to place the boats upon. On the 26th Parry says,

"The weather improving toward noon on the 26th, we obtained the meridian altitude of the sun, by which we found ourselves in latitude 82° 40′ 23″; so that, since our last observation (at midnight on the 22d), we had lost by drift no less than thirteen miles and a half; for we were now more than three miles to the *southward* of that observation, though we had certainly traveled between ten and eleven due north in this interval! Again, we were but one mile to the north of our place at noon on the 21st, though we had estimated our distance made good at twenty-three miles. Thus it appeared that for the last five days we had been struggling against a southerly drift exceeding four miles a day."—P. 102.

It now became obvious that the sea in this latitude had assumed a character utterly unfit for the kind of navigation, or, rather, of floe-traveling, which had hitherto been pursued—in short, that it had become hopeless to pursue the journey any farther.

"It had, for some time past, been too evident that the nature of the ice with which we had to contend was such, and its drift to the southward, especially with a northerly wind, so great, as to put beyond our reach any thing but a very moderate share of success in traveling to the northward. Still, however, we had been anxious to reach the highest latitude which our means would allow, and with this view, although our whole object had long become unattainable, had pushed on to the northward for thirty-five days, or until half our resources were expended, and the middle of our season arrived. For the last few days the eighty-third parallel was the limit to which we had ventured to extend our hopes; but even this expectation had become considerably weakened since the setting in of the last northerly wind, which continued to drive us to the southward during the necessary hours of rest nearly as much as we could gain by eleven or twelve hours of daily labor. Had our success been at all proportionate to our exertions, it was my full intention to have proceeded a few days beyond the middle of the period for which we were provided, trusting to the resources we expected to find at Table Island. But this was so far from being the case, that I could not but consider it as incurring useless fatigue to the officers and men, and unnecessary wear and tear for the boats, to persevere any longer in

the attempt. I determined, therefore, on giving the people one entire day's rest, which they very much needed, and time to wash and mend their clothes, while the officers were occupied in making all the observations which might be interesting in this latitude; and then to set out on our return on the following day. Having communicated my intentions to the people, who were all much disappointed in finding how little their labors had effected, we set about our respective occupations, and were much favored by a remarkably fine day."—P. 102, 104.

In fact, the commander of the expedition, the officers and men, had all of them been laboriously and uselessly employed for thirty-five days of continuous and most fatiguing drudgery, to be compared in its effect to nothing less than the labor of rolling the stone of Sisyphus, the floe on which they were traversing, as they supposed, ten or twelve miles one day, having rolled them back again ten or twelve miles, and often more, the next.

The farthest point of latitude reached was on the 23d, and probably was to 82° 45′; that of their return, 82° 40′ 23″, and long. 19° 25′ east. The day was one of the warmest and most pleasant they yet had experienced upon the ice; the thermometer only from 31° to 36° in the shade, and 37° in the sun; no bottom with 500 fathoms of line.

"At the extreme point of our journey our distance from the Hecla was only one hundred and seventy-two miles in a S. 3° W. direction. To accomplish this distance we had traversed, by our reckoning, two hundred and ninety-two miles, of which about one hundred were performed by water previously to our entering the ice. As we traveled by far the greater part of our distance on the ice three, and not unfrequently five, times over, we may safely multiply the length of the road by two and a half; so that our whole distance, on a very moderate calculation, amounted to five hundred and eighty geographical, or six hundred and sixty-eight statute miles, being nearly sufficient to have reached the Pole in a direct line. Up to this period we had been particularly fortunate in the preservation of our health; neither sickness nor casualties having occurred among us, with the exception of the trifling accidents already mentioned, a few bowel complaints, which were soon removed by care, and some rather troublesome cases of chilblains, arising from our constant exposure to wet and cold."—P. 104, 105.

On this day of rest from their labors, Parry says,

"Our ensigns and pendants were displayed during the day; and severely as we regretted not having been able to hoist the British flag in the highest latitude to which we had aspired, we shall perhaps be excused in having felt some little pride in being the bearers of it to a parallel considerably beyond that mentioned in any other well-authenticated record."

On the 27th they set out on their return to the southward, and, says Parry, "I can safely say that, dreary and cheerless as were the scenes we were about to leave, we never turned homeward with so little satisfaction as on this occasion." No man nor body of men are chargeable with blame for not accomplishing impossibilities: the party in question have done more than had ever been done at any time, or more probably than will ever be done again on the same plan; it is much to say that they succeeded, in advancing toward the Pole of the earth, to a point which no human being before them had ever reached, and after a cheerful and patient endurance of laborious drudgery, which, it is to be hoped, no human being will ever hereafter be induced to repeat.

It will not be necessary to follow our voyagers on their return; the permanency of the southern current, for so it would seem, afforded them the satisfaction of feeling that whatever length of journey they made to the northward would be so much gain, and no back-sliding; every mile would tell; they had, moreover, the advantage which is noticed by Parry, of getting rid of the glare from the snow, on account of the lowness of the sun at night, as also the comfortable change when looking out for the road; and had the sun behind them, instead of facing it, as on the outward journey. Nothing very remarkable occurred on their return. A quantity of snow was met with, tinged to the depth of several inches with some red coloring matter: this red snow occurred in two or three spots, some of which they bottled, and found, on examination in England by Sir William Hooker, as former specimens were, to be the *Palmella nivalis*, one of the Algæ, and which, long before, Bauer had pronounced to be *Uredo nivalis*.

"A fat she-bear crossed over a lane of water to visit us, and approaching the boats within twenty yards, was killed by Lieut. Ross. The scene which followed was laughable

even to us who participated in it. Before the animal had done biting the snow, one of the men was alongside of her with an open knife, and being asked what he was about to do, replied, that he was going to cut out the heart and liver, to put into the pot which happened to be then boiling for our supper. In short, before the bear had been dead an hour, all hands of us were employed, to our great satisfaction, in discussing the merits not only of the said heart and liver, but a pound per man of the flesh; besides which, some or other of the men were constantly frying steaks during the whole day, over a large fire made of the blubber."—P. 114.

The consequence of thus gormandizing on fat bear's flesh was obvious. Devoured as it was with such avidity by the men, some of them complained for several days of pains such as usually arise from indigestion, "though they all," says Parry, "amusingly enough, attributed this effect to the quality, and not the quantity of meat they had eaten." On the 8th of August they hauled up the boats only once, and had made, though by a winding channel, four or five miles of southing. "This was so unusual a circumstance, that we could not help entertaining some hope of our being at no great distance from the open sea, which seemed the more probable, from our having seen seven or eight narwhals, and not less than two hundred rotges, a flock of these little birds occurring in every hole of water." On the 10th a strong southerly wind, that had blown from that quarter for the last thirty hours, had blown them back to the northward only four miles, which it is said "afforded a last and striking proof of the general tendency of the ice to drift southward about the meridians on which we had been traveling." Arrived at 81° 30′, the sea was found to be crowded with shrimps and other sea-insects, principally the *Clio Borealis* and *Argonauta Arctica*, on which numerous birds were feeding. This was the 11th of August, on the morning of which the first sound of the swell was heard under the hollow margins of the ice, and in a quarter of an hour we reached the open sea, which was dashing with heavy surges against the outer masses. "We hauled our boats," says Parry, "upon one of these, to eat our last meal upon the ice." They were now fifty miles distant from Table Island, which they reached about noon, and found that the bears

had devoured all the bread, which occasioned a remark among the men that "Bruin was only square with us." Captain Parry's observation on finally quitting the ice, after taking up his abode upon it for forty-eight days, was, "I can not describe the comfort we experienced in once more feeling a dry and solid footing." Of the forty-eight days, thirty-three were passed on the outward, and fifteen on the return voyage; such is the difference between going with the stream and against it.

Table Island, however, afforded no place for the men to rest. So rugged and inhospitable is this northern rock, that not a single spot was found where the boats could be hauled up. To the islet lying off Table Island, which, Parry says, "is interesting, as being the northernmost known land upon the globe, I have applied the name of Lieutenant Ross in the chart; adding, "for I believe no individual can have exerted himself more strenuously to rob it of this distinction." Any thing that confers a distinction on the name of James Ross is worthy of recording, and such is the following passage from Sir William Hooker on the "Botany:" "Those species that were gathered in Ross's Islet are peculiarly interesting, from the circumstance of that island constituting the most northern known land in the world." The plants named are, Bryum—Hypnum (two species)—Tricostomum—Polytrichum—Jungermannia—Gyrophora (Rocktripe, two species)—Cetraria—Cenomyce (Reindeer grass, two species)—Stercoiolon—Sphærophoron—Alectoria—Cornicularia—Ulva—Philota.

It was not till the 21st of August that they arrived on board the Hecla, after an absence of sixty-one days, "being received," says Parry, "with that warm and cordial welcome which can alone be felt and not described." Thus ended at Spitzbergen this novel and perilous expedition, of which, though the object was not accomplished, every officer and man employed in it may be proud. Thus far Parry concludes his narrative:

"The distance traversed during this excursion was five hundred and sixty-nine geographical miles; but allowing for the number of times we had to return for our baggage during the greater part of the journeys over the ice, we estimated our actual traveling at nine hundred and seventy-eight geo-

graphical, or eleven hundred and twenty-seven statute miles. Considering our constant exposure to wet, cold, and fatigue, our stockings having generally been drenched in snow-water for twelve hours out of every four-and-twenty, I had great reason to be thankful for the excellent health in which, upon the whole, we reached the ship. There is no doubt that we had all become, in a certain degree, gradually weaker for some time past; but only three men of our party now required medical care, two of them with badly swelled legs and general debility, and the other from a bruise; but even these three returned to their duty in a short time.

"I can not conclude the account of our proceedings without endeavoring to do justice to the cheerful alacrity and unwearied zeal displayed by my companions, both officers and men, in the course of this excursion; and if steady perseverance and active exertion on their parts could have accomplished our object, success would undoubtedly have crowned our labors. I must also mention, to the credit of the officers of Woolwich Dockyard, who took so much pains in the construction of our boats, that notwithstanding the constant and severe trial to which their strength had been put—and a more severe trial could not well be devised—not a timber was sprung, a plank split, or the smallest injury sustained by them; they were, indeed, as tight and as fit for service when we reached the ship, as when they were first received on board, and in every respect answered the intended purpose admirably."*—P. 128, 129.

Captain Parry gives all due credit for the diligent and active manner in which Lieutenants Foster and Crozier fulfilled their instructions during his absence, and for the complete state in which he found the Hecla on his return—the various observations interesting to science sedulously performed, specimens of natural history carefully collected and preserved, and all the duties of the ship carried on to his perfect satisfaction. Many interesting observations were made on the inclination, dip, and intensity of the magnetic needle. "Among other magnetical observations," says Parry, "an interesting series of hourly experiments had been made on the diurnal changes of variation and intensity, and continued for several days without interruption, by the two lieutenants." From these it appears that a diurnal oscillation of the magnetic needle takes place, usually amount-

* A well-deserved compliment to the artificers of that yard, and to their able master-shipwright, Mr. Oliver Lang.

ing to about a degree and a half, and in some instances to $2\frac{3}{4}°$, the maximum variation being about 4^h 22′ P.M. The change of intensity giving an increased action was about 10^h 20′ A.M., and minimum intensity about midnight.

The animals met with on the shores of Treurenburg Bay and of Waygat Strait were of the same kind, but less plentiful than those on the west coast of Spitzbergen; they consisted chiefly of sea-horses, narwhals, and white whales, but no black ones; the more common animals were principally reindeer, bears, foxes, glaucous and ivory gulls, tern, eider ducks, and grouse. Seventy reindeer were killed, chiefly small, and until the middle of August not in good condition; they were met with in herds, from six or eight to twenty. Three bears were killed, one of which was of more than ordinary dimensions, measuring eight feet four inches from the snout to the root of the tail.

The boat expedition was less fortunate with regard to animals; few living creatures were seen, and these mostly gulls, and one insect found on a piece of ice, and it was a dead *Aphis*. It has a chapter to itself in the Appendix, headed INSECT. Parry says, "I am indebted to the friendship of Mr. J. Curtis for the following description of the only insect that was obtained during the voyage." The description gives no intelligible information, only that it resembles another species called *A. picea*. "The circumstance of the Aphis borealis having been found on floating floes of ice on the Polar Sea, at one hundred miles distance from the nearest known land, and as far north as $82\frac{3}{4}°$, renders it in a more than ordinary degree interesting. As the one it resembles feeds on the silver fir, so it is supposed that the floating trees of fir that are to be found so abundantly on the shores and to the northward of Spitzbergen might possibly be the means by which this insect has been transported to the northern regions." Perhaps so; but it may be asked, By what possible means were the *firs* thus transported?

Sir Edward Parry, at the conclusion of his narrative, after observing that the object is of more difficult attainment than was before supposed, even by those persons

who were the best qualified to judge of it, is still of opinion that, after much consideration, and some experience of the various difficulties which belong to it, he can not recommend any material improvement in the plan lately adopted. With all deference to the opinion of so distinguished a sea-officer, in possession of so much experience as Sir Edward Parry, there are others who express dislike of such a plan; and it is not improbable that many of his readers will be disposed to come to the conclusion that, so long as the Greenland Seas are hampered with ice—so long as floes, and hommocs, and heavy masses continue to be formed—so long as a determined southerly current prevails, so long will any attempt to carry out the plan in question in like manner fail. No laborious drudgery will ever be able to conquer the opposing progress of the current and the ice. Besides, it can hardly be doubted that this gallant officer will admit, on farther consideration, that this unusual kind of disgusting and unseaman-like labor is not precisely such as would be relished by the men, and it may be said, is not exactly fitted for a British man-of-war's man; moreover, that it required his own all-powerful example to make it even tolerable.

The narrative having thus far advanced, a conversation with Sir Edward Parry prepared the writer in some degree for the following letter:

"*Admiralty, 25th Nov.*, 1845.

"My dear Sir John,—Understanding that you are preparing an account of the proceedings of all the expeditions by sea and land which have been engaged in Arctic discovery in our own times, I venture to trouble you with my present views as to the practicability of reaching the North Pole over the ice, to which you may possibly make allusion in the course of the interesting narratives which you have undertaken.

"It is evident that the causes of failure in our former attempt in the year 1827 were principally two: first and chiefly, the broken, rugged, and *soft* state of the surface of the ice over which we traveled; and, secondly, the drifting of the whole body of ice in a southerly direction. On mature reconsideration of all the circumstances attending this enterprise, I am induced to alter the opinion I gave as to its practicability in my Journal, p. 144, because I believe it to be an object of no very difficult attainment, if set about in a different manner. My plan is, to go out with a single ship to Spitz-

bergen, just as we did in the Hecla, but not so early in the season, the object for that year being merely to find secure winter quarters as far north as possible. For this purpose, it would only be necessary to reach Hakluyt's Headland by the end of June, which would afford ample leisure for examining the more northern lands, especially about the Seven Islands, where, in all probability, a secure nook might be found for the ship, and a starting-point for the proposed expedition some forty or fifty miles in advance of the point where the Hecla was before laid up. The winter might be usefully employed in various preparations for the journey, as well as in magnetic, astronomical, and meteorological observations of high interest in that latitude. I propose that the expedition should leave the ship in the course of the month of April, when the ice would present one hard and unbroken surface, over which, as I confidently believe, it would not be difficult to make good thirty miles per day without any exposure to wet, and probably without snow-blindness. At this season, too, the ice would probably be stationary, and thus the two great difficulties which we formerly had to encounter would be entirely obviated. It might form a part of the plan to push out supplies in advance to the distance of one hundred miles, to be taken up on the way, so as to commence the journey comparatively light; and as the intention would be to complete the enterprise in the course of the month of May, before any disruption of the ice or any material softening of the surface had taken place, similar supplies might be sent out to the same distance, to meet the party on their return.

"It might, farther, be worth while to take reindeer from Hammerfest in passing, with the chance of keeping them alive during the winter on such farinaceous food as the provision of the ship could furnish.

"I will only add, that this plan might be accomplished without the ship incurring any material risk, since the navigation both out and home need only be performed at a season when the sea is very little encumbered with ice; and, moreover, an opportunity would be afforded during two seasons of stretching far to the northward in the ship, if the state of the ice should prove favorable. I remain, yours, &c.,

"W. PARRY."

"Sir John Barrow, Bart."

The plan here described is no doubt an improvement over the one that failed; but without presuming too much, not being altogether unacquainted with a ship's navigating among what is called sailing-ice, it may be allowable to suggest another and a different plan, and

perhaps, on the whole, less objectionable. It would consist of two small ships similar to those which, after three years' service in the Antarctic Seas, are now engaged in the ice of the North Polar Seas; they should be sent in the early spring along the western coast of Spitzbergen, where usually no impediment exists, as far up as 80°; take every opportunity of proceeding directly to the north, where, about 82°, Parry has told us, the large floes had disappeared, and the sea there was found to be loaded only with loose, disconnected, small masses of ice, through which ships would find no difficulty in sailing, though totally unfit for boats dragging; and as this loose ice was drifting to the southward, he farther says, that before the middle of August a ship might have sailed up to the latitude of 82° almost without touching a piece of ice. It is not, then, unreasonable to expect, that beyond that parallel, even as far as the Pole itself, the sea would be free of ice during the six summer months of perpetual sun through each of the twenty-four hours, which, with the aid of the current, would in all probability destroy and dissipate the Polar ice.

If, then, on the return of Sir John Franklin's ships, the screw-propeller supplied to each should have been found to answer, a fair opportunity would be afforded of deciding the question. The trial would soon be made, and, from the experience of Parry, would be made without danger of loss to ships or men, for it is probable they would not have any ice-bound shores to contend with. The distance from Hakluyt's Headland to the Pole is 600 geographical miles. Granting the ships to make only twenty miles in twenty-four hours (on the supposition of much sailing-ice to go through), even in that case it would require but a month to enable the explorer to put his foot on the pivot or point of the axis on which the globe of the earth turns; remain there a month, if necessary, to obtain the sought-for information, and then, with a southerly current, a fortnight, probably less, would bring him back to Spitzbergen.

To such as may venture to raise their feeble objections against this, and other daring enterprises if not attended with the prospect of probable profit, let them

receive the answer given by that brave old navigator, Sir Martin Frobisher, when attempts were made by his friends to dissuade him from engaging in the discovery of a northwest passage: "It is the only thing in the world that is left yet undone whereby a notable mind might be made famous and fortunate." We may still say, "The North Pole is the only thing in the world about which we know nothing; and that want of all knowledge ought to operate as a spur to adopt the means of wiping away that stain of ignorance from this enlightened age."

But there are others besides utilitarians that make objections to inquiries of this nature, on the score of religious prejudices, and will say that God never intended us to scrutinize places against which He had set his barrier. Thus the Rev. Lewis Way, the wealthy proprietor of Stansted, and so stanch an advocate for the conversion of the Jews that he made a pilgrimage to Jerusalem with that object in view—this reverend gentleman one day said to a friend, "I know Sir Joseph Banks very well, and he was a good friend of mine, though he used to joke with me sometimes about my endeavor to convert the Jews; but I told him that my scheme was, at any rate, a much wiser one than his · he was trying to send ships to the North Pole, which it was clear God never intended, while the conversion of the Jews was an event which we all know was to be brought about some time or other."

This may be looked upon, as doubtless Sir Joseph Banks looked upon it, as sheer nonsense. Every intelligent mind must be satisfied that, the more closely we investigate the works of creation, the more, as rational beings, we must be convinced that nothing therein has been made in vain, nor without a preconceived and settled design, the finished work of a beneficent and Almighty Power; and if Mr. Lewis Way had recollected a passage in the most ancient record of his favorite Jews, he would recollect his having found therein that God gave to man "dominion over *all* the earth," and made no exception of the North Pole.

The Royal Society, however, and the Commissioners of Longitude, were less scrupulous on the subject. To

encourage a visit to the North Pole, they recommended to his majesty in council to pass an order granting the payment of a reward of five thousand pounds to the first ship that shall approach within one degree of the North Pole. This order is not to be considered as merely an inducement for making the attempt, but chiefly to manifest their opinion of the value of the scheme. It is pretty well understood that British naval officers, who, like Parry, Franklin, and others, embark on arduous and hazardous enterprises of this nature, are influenced not so much by motives of pecuniary rewards as by the hope of contributing, by their exertions, to the enlargement of knowledge and science; their additional object, and that a laudable one, being the acquirement of present reputation and future fame.

> "Fame is the spur that the clear spirit doth raise
> (That last infirmity of noble minds)
> To scorn delights and live laborious days."

Dr. Johnson said that the man who had seen the great wall of China might be considered as shedding a luster on his grand-children. But what is the wall of China? which has not only been seen by Lord Macartney and his party, but scaled, and its broad parapet trodden on, by them. With how much more brilliant a luster would this great moralist have decorated the descendants of that man who had stood on the pivot whereon this globe of ours forever turns, and hoisted the British flag on the most remarkable spot on the earth's surface? The wall of China may be seen any day; and any one, without the least difficulty, might obtain a view of it by a trip in one of our yachts to the Gulf of Leatung, into which it descends and terminates.

To describe what a visitor to the Pole might obtain in the way of science, it can only be said, in our present state of ignorance, that the whole field would be open to him; every thing would be novel, and that alone would rouse his attentive faculties. *Est hominum natura novitatis avida.* The difficulties that would occur may be appreciated at home, but they will be greater or less according to circumstances, of which we yet know nothing; that is, whether the Pole be covered with an open sea, an icy sea, or by land; and which of the three would

create the greatest difficulties in the way of acquiring information? In all respects an open sea would appear to be the most disadvantageous. In the first place, it would, in all probability, be so deep that the ship could not anchor, or deep enough not to admit of her keeping steadily her place for making accurate observations; in the next, by her moving about, her commander would very speedily find out that, as every meridian must lie in the direction of south, he had lost that on which he had approached the Pole, and, consequently, would be at a loss to shape his course homeward. The settling of this point will naturally suggest itself as first among the many novel phenomena which will arrest his attention, and the following observations will probably occur to him.

In the first place, it will be obvious that the time of day—or, rather, of the twenty-four hours—would no longer be marked by any apparent change in the altitude of the sun above the horizon, because, to an observer at the Pole, no such change would take place, except to the small amount of the daily change of declination. Thus, not only to the eye, but also for the practical purpose of obtaining the time by astronomical observation, the sun would appear throughout the twenty-four hours neither to rise nor fall, but to describe a circle round the heavens parallel to the horizon. It follows that this mode of obtaining the time would utterly fail; and, indeed, however startling the fact may seem, it may nevertheless be asserted with truth, that there would no longer be any such thing, strictly speaking, as apparent time at all. This will appear clear by considering that apparent time refers only to the particular meridian on which an observer happens to be placed, and is marked and determined only by the distance of the sun or other heavenly body from that meridian. An observer at the Pole being on no one meridian, but at the point where all meridians meet, apparent time has to him no longer either existence or meaning.

Before our navigators entered upon this expedition, their attention was naturally directed to the best, and, indeed, only certain method of insuring their return from the Pole *on the right meridian*. Two methods, and,

we believe, only two, present themselves for this purpose; the one being by the compass, the other by means of chronometers. From the observations already made in the Arctic regions, it may be considered as certain that, at the Pole, the magnetic needle would freely traverse, and the compass remain an efficient practical instrument; for as it is to the *magnetic* pole, and not to the pole of the earth, that the needle is directed, and as the dip of the needle only amounts to 82° 22′ at the most northerly point yet reached, it is probable that the horizontal or directive force of the needle would continue strong and efficient at the Pole, and, consequently, that the magnetic bearing of any point on the globe might be accurately obtained by it. Indeed, none of the singular phenomena relating to the magnetic needle observed by Parry on his former voyage through Barrow's Strait, such as the north end of the needle pointing due south, and then southeast, and the entire uselessness of the compasses, owing to the iron in the ship proving stronger than the directive power of the needle, were to be anticipated on reaching the pole of the earth. For the same reason, it was not to be expected that the achievement since performed by his gallant companion, James Ross, of actually planting the British flag on the magnetic Pole, could now be accomplished, as it was already known that the point upon the earth's surface which is so designated lay in a much lower latitude.

The other method of insuring the return of our travelers upon the right meridian, namely, by means of chronometers, was one which required some consideration. It is obvious that, to an observer standing upon the Pole, the sun would, at the precise moment of apparent noon at any given place, appear to the observer exactly in the direction of that place, and that consequently this, as ascertained by chronometers, would prove an unerring guide as to the right direction. But in the ordinary mode of marking the dial-plates of watches, from one hour to twelve only, there was reason to apprehend that the *wrong* twelve o'clock might be taken, under circumstances of constant sunshine, and without any change in the altitude of that luminary to distinguish day from night. To avoid the possibility of this mistake, the pre-

caution w s taken of constructing chronometers (each officer ca ying one in his pocket) having the dial-plates marked w th twenty-four hours, and the hour-hand making only one revolution in that period. Thus, whenever the chronometers indicated apparent noon at Greenwich, the sun would be exactly over the meridian of that place, and so of any other place of known longitude; for instance, the harbor where our travelers had left their ship, and to which they desired to return.

In visiting a part of the globe on which the foot of man has never before trodden, it is impossible to say what benefits may accrue to science; but in the enterprise to which we are now alluding, there is one object of the very highest scientific interest which might be attained by traveling to the Pole, namely, the measurement of a degree of the meridian commencing from the Pole itself. Many readers of this narrative are aware that the form of the globe has long since been ascertained to be that of an oblate spheroid, having its equatorial diameter considerably longer than the polar; in more popular language, that the earth is flattened at the poles; but it still remains a matter of doubt *in what degree* this flattening exists; and as no method of ascertaining this is so conclusive as the actual measurement of a meridian at the Pole and at the Equator, this object alone would well repay any effort that might be made to effect it; even if a sufficient length of line could be measured in one of the meridians that are clustered on the Pole, the difficulty of preserving it would require the most rigid attention.

The swinging of a pendulum is perhaps a less accurate method of obtaining the ellipticity of the earth, but it is the operation of a single person, whereas the actual measurement of the meridian line requires several; and as an increase of gravitation takes place from the Equator to the Pole, the latter makes it most desirable that the requisite observations should be made there, or as near to it as possible; but a ship on an open or icy sea would not answer.*

The tides at the Pole would be an interesting subject

* The reader is referrred to the several portions of this volume for the pendulum observations that have been made and herein given.

to examine ; but it does not appear that any contrivance on an open sea, or a sea of ice, could be made use of to ascertain the rise and fall.

Magnetism, atmospherical electricity, and the Aurora Polaris, and all other meteorological observations, would afford scope enough on board ship.

Should land, however small the portion, be found at or near the Pole, all the various observations would be conducted to a successful issue. It may be presumed that any such land will not be mountainous, as no icebergs are ever sent down from that quarter, these masses having been ascertained as products of glaciers on the sides and valleys of high mountains, as in Spitzbergen and Greenland. On a piece of land the pendulum may be swung, and the rise, fall, and direction of the tides observed. It would also be interesting to examine into the nature of the soil, and its vegetable productions ; the disposition of the strata, and the mineral products, if any ; and if the land be of a tolerable extent, a meridional distance may be measured. Other matters of interest and novelty would occur to a scientific and skillful observer. These are mere speculations, thrown out at random, but may serve, among other suggestions, as objects of attention.

Captain Sir Edward Parry having now concluded his fifth voyage into the Arctic regions, in four of which he commanded, and was second in the other, and there being no farther attempt in contemplation at the conclusion of the last voyage to continue the search, he deemed it expedient to close his honorable and useful naval career, at least in sea-going ships. It may, therefore, not be out of place here to put on record a memorandum of the valuable services rendered to his country in various situations, and to the navy in particular, with whose interests he is still connected.

It has been stated, in the first Arctic voyage, in what manner he was introduced into that line of service, by being selected to command one of the discovery ships.

1818. The Alexander, as lieutenant commanding, being second to Commander Ross.

1819. The Hecla.—Appointed as lieutenant to command her, and as commander of the expedition: two years.

1820. The Fury.—Appointed as *commander*, and to the command of the expedition; advanced to the rank of captain in November, 1821.
1823. Acting hydrographer to the Admiralty, 1823, in the room of Captain Hurd, deceased.
1824. Hecla.—Appointed as captain (though only a sloop) and as commander of the expedition.
Acting hydrographer, second appointment, the vacancy not having been filled up.
1826. Appointed to the command of the Hecla, and of the expedition toward the North Pole.
1827. Third appointment as hydrographer, and continued to act until May, 1829: and in the same year received the honor of knighthood. Resigned the situation of hydrographer, and Captain Beaufort appointed, who still holds it.
1829. Went out to New South Wales as Commissioner to the Australian Agricultural Company, by permission of the Admiralty, and returned in November, 1834.
1835. Assistant Poor-law Commissioner in Norfolk; but his health failing, laid by for one year.
1837. Appointed to organize the Packet Service, then transferred to the Admiralty.
1837. Appointed Controller of Steam Machinery, in which important situation he still remains; a situation that requires all that talent and assiduous attention which he is known to possess, and which it is to be hoped he may long continue to hold, to his own satisfaction, and for the benefit of the public service.

The character and conduct of Sir Edward Parry as a captain in command of a ship of war has been fully exhibited in the present narrative, abridged as it is: prompt in difficulty, cool in danger, fertile in expedients, and rich in resources, he was never unprepared in the hour of need; to the people under his charge he was kind, considerate, and attentive, and while rigidly exacting the performance of their duties, was ever studious to administer to their comforts and their welfare, instructing them that these benefits could only be acquired and preserved by a strict obedience to command, steady good conduct, and due regard to the duties of religion.

If an officer who has accompanied Captain Parry in all his Arctic and Polar voyages were passed over in silence, it would properly be considered as a dereliction of justice and of duty in the writer of this narrative. The

following memorandum of Captain Sir James Ross's services will put the reader in possession of an abstract of what he has performed:

In April, 1812, he entered the navy.

1812 to 1817. Volunteer first class, midshipman, and mate with Commander Ross.

1818. Admiralty midshipman in the Isabella in Commander Ross's voyage of discovery to the Arctic Seas.

1819, 1820. Admiralty midshipman in the Hecla in Captain Parry's first voyage of discovery to the Arctic Seas.

1821, 1822, 1823. Admiralty midshipman in the Fury in Captain Parry's second voyage of discovery to the Arctic Seas; was made lieutenant, 26th December, 1822.

1824, 1825. Lieutenant in the Fury, Captain Hoppner, third voyage of Captain Parry. To draw charts and make drawings.

1827. First lieutenant in the Hecla, Captain Parry; accompanied him in command of the second boat in his attempt to reach the North Pole. Promoted on his return, 8th November, 1827.

1829 to 1833. In private steam-vessel Victory.
On the 1st of June, 1831, planted the Union-jack on the North Magnetic Pole. On his return, presented by the College of Arms with an addition to the arms of Ross, representing the flag flying on the Magnetic Pole, with additional crest, "on a rock, a flag-staff erect, thereon hoisted the Union-jack, inscribed with the date, 1st June, 1831."

1834. Promoted to the rank of captain, 28th October, 1834.

1835. Employed making magnetic observations preparatory to commencing the magnetic survey of England.

1836. Captain in the ship commissioned by the Admiralty, sent in search of the missing whalers, in the depth of winter.*

1837, 1838. Employed, at the desire of the Lords Commissioners of the Admiralty, in determining the variation of the compass on all parts of the coast of Great Brit-

* On a representation from Hull that eleven whale ships and six hundred men were left in the ice and in danger of perishing, and requesting the Admiralty to send out relief, Captain James Ross volunteered to go out in the depth of winter, and the three lieutenants, Crozier, Inman, and Ommanney, with the three mates, Jesse, Buchan, and John Smith, and Mr. Hallett, clerk in charge, volunteered to join him. He hoisted his pennant on the 21st of December, and after a stormy voyage arrived in Davis's Strait, when he found nine of the missing ships were by that time in England, that the tenth was released and on her passage, and the eleventh was probably lost, as some of her casks had been picked up at sea.

ain, and the general magnetic survey for determining duration of the time of equal variation, dip, and intensity, in conjunction with Professor Lloyd, Colonel Sabine, and Professor Phillips, at the request of the British Association.

And lastly, from 1839 to 1843, Captain H. M. S. Erebus, in command of the Antarctic Expedition.

13th March, 1844, received the honor of knighthood.

20th June, 1844, Hon. D. C. L., Oxford.

Received gold medals of Geographical Societies of England and of France.

It will be seen that Mr. James (now Sir James) Ross has risen by regular gradation from the lowest to the highest rank in his profession, and to the honors he now enjoys, by his indefatigable zeal, self-taught abilities, and diligence. It is due to him, therefore, in taking leave of his Arctic labors, at the same time with his friend and commanding officer Sir Edward Parry, to express a conviction, in common with that of his brother officers and associates, that few men possess, in a more eminent degree, the qualities required in most arduous attempts. To a strong and vigorous constitution, and bodily powers of no ordinary kind, James Ross unites an ardent love of enterprise, a determined perseverance in the attainment of his object, and a mind undaunted by difficulty or danger. To these qualities must be added that advancement in navigation, astronomy, natural history, and other branches of science which few naval officers can boast of, but which were such as fitted him peculiarly for selection to the command of the recent Antarctic Expedition, for the results of which, from his pen, public expectation is more than usually alive.

CHAPTER X.

CAPTAIN JOHN FRANKLIN.

1819–20–21–22.

Narrative of a Journey to the Shores of the Polar Sea. By JOHN FRANKLIN, Capt. R. N., F. R. S., Commander of the Expedition.

THIS expedition, under the command of Commander (now Captain Sir John) Franklin, has not only added greatly to the geography, geology, and natural history of that portion of the northern coast of North America within the Arctic regions, but more especially to that which borders on the southern shores of the Polar Sea; and has also contributed largely to, and firmly established, that estimate of the physical, mental, and moral character of British seamen—equally good when serving on shore as afloat—which we Englishmen had long formed, and of which we are justly proud. It has also supplied traits of character, and of the physical constitution of the various native tribes.

"The narrative of Captain Franklin" (the writer is here borrowing from himself) "adds another to the many splendid records of the enterprise, zeal, and energy of British seamen—of that cool and intrepid conduct which never forsakes them on occasions the most trying—that unshaken constancy and perseverance in situations the most arduous, the most distressing, and sometimes the most hopeless that can befall human beings; and it furnishes a beautiful example of the triumph of mental and moral energy over mere brute strength, in the simple fact that out of fifteen individuals inured from their birth to cold, fatigue, and hunger, no less than ten (native landsmen) were so subdued by the aggravation of those evils to which they had been habituated as to give themselves up to indifference, insubordination, and despair, and, finally, to sink down and die, while of five British seamen unaccustomed to the severity of the climate, and the hardships attending it, *one* only fell, and that one by the murderous hand of an assassin. A light, buoyant heart, a

confidence in their own powers, supported by a firm reliance on a merciful Providence, never once forsook them, nor suffered the approach of despondency, but brought them safely through such misery and distress as rarely, if ever, have been surmounted."

The five persons mentioned were Captain John (now Sir John) Franklin, at this time commanding an expedition, not for attempting the discovery of a northwest passage, but to supply the means of facilitating one, and to extend the geography of a part of the Polar regions very little known; *Doctor Richardson*, a naval surgeon, now Medical Inspector of the Royal Naval Hospital at Haslar: "To *Doctor Richardson*, in particular," Sir John says, "the exclusive merit is due of whatever collections and observations have been made in the department of natural history; and I am indebted to him in no small degree for his friendly advice and assistance in the preparation of the present narrative. The Appendix (upward of two hundred and eighty pages) is mostly his own." Doctor Richardson volunteered to accompany Captain Franklin on his second expedition to the shores of the Polar Sea; also Mr. *George Back* and Mr. *Robert Hood*, Admiralty midshipmen, to make observations, drawings of the land, of the natives, and objects of natural history, the former of whom is now Captain Sir George Back, and the latter was the victim (above alluded to) of an assassin. The fifth was *John Hepburn*, a true, faithful, and affectionate English seaman, and their only attendant, who, on the conclusion of the expedition, was deservedly rewarded with a permanent situation in one of the dockyards. Of this seaman, the testimony of Sir John Franklin is too valuable to be omitted. "And here," he says, "I must be permitted to pay the tribute due to the fidelity, exertion, and uniform good conduct, in the most trying situations, of John Hepburn, an English seaman, and our only attendant, to whom, in the latter part of our journey, we owe, under Divine Providence, the preservation of the lives of some of the party."*

The instructions which Franklin received from Earl Bathurst, by whom he was appointed, on the recommendation of the Lords Commissioners of the Admiral-

* Introduction.

ty, informed him that the main object of the expedition was to explore the northern coast of America, from the mouth of the Copper Mine River to the eastward; to lay down the line, or trending, of that coast, as far as to the eastern extremity of that continent; in short, to take all means for obtaining accurate information respecting that unknown line of coast. And it is to the credit of the then Board of Admiralty for suggesting this expedition, which might be of the utmost importance in aiding the ships under Commander Parry, which were to proceed about the same time for the Polar Sea, and might have to touch upon the coast in question.

On the 22d of May, 1819, the little party, having received their credentials from the several authorities at home, embarked on board the Hudson Bay Company's ship Prince of Wales. Contrary winds and foul weather during the first week obliged the ship to anchor in Yarmouth Roads, where the officers and passengers ventured on shore for a few hours; but the wind suddenly changing, the commander caused guns to be fired, as an intimation of putting to sea; the passengers forthwith embarked, but Mr. Back was missing; no time, however, was to be lost, and shortly after the ship sailed without him, and arrived at Stromness on the 3d of June, where business with the Hudson's Bay agent, and the difficulty of obtaining four boatmen to assist in the navigation of the lakes and rivers of North America, detained them till the evening of the 9th, "when we had the gratification," says Franklin, "of welcoming our absent companion, Mr. Back. His return to our society was hailed with sincere pleasure by every one, and removed a weight of anxiety from my mind. It appears he had come down to the beach at Caistor just as the ship was passing by, and had applied to some boatmen to convey him on board, who, discovering the emergency of his case, demanded an exorbitant reward, which he was not at the instant prepared to satisfy, and, in consequence, they positively refused to assist him. Though he had traveled nine successive days, almost without rest, he could not be prevailed upon to withdraw from the agreeable scene of a ball-room, in which he joined us, until a late hour." "This untoward circumstance," as

Franklin called it at the time, afforded a sample of his eagerness and energy, and gave to Back himself a gentle specimen of what he was doomed thereafter to undergo with infinitely more severity.

The incidents of the voyage require not to be related; pleasant enough until they approached that dangerous and by all abhorred island, Resolution, in the mouth of Hudson's Strait, near the rocky shores of which, usually beset with heavy ice, fogs, and irregular currents, the vessel narrowly escaped shipwreck. Passing this, however, they arrived in safety at York Factory, in Hudson's Bay, on the 30th of August. Here they were cordially received by the governor and servants of the Hudson's Bay Company, and were furnished by them with a boat of the largest size, well stored with provisions and ammunition, as much as she could carry. They were also furnished with letters to all their agents in the several factories in the country, directing them to give every possible assistance toward furthering the object of the expedition. Here also they had the good fortune to meet with several of the partners of the Northwest Company, from whom they also received the most friendly and full assurance of the cordial endeavors of the wintering partners of their establishment to promote the interest of the expedition. This was the more gratifying, as there then existed a violent commercial rivalry between the two companies. With the knowledge of this, and with that prudence and propriety of conduct that has at all times been the characteristic of Franklin, he deemed it expedient to "issue a memorandum to the officers of the expedition, strictly prohibiting any interference whatever in the existing quarrels, or any that might arise, between the two companies; and on presenting it to the principals of both the parties, they expressed their satisfaction at the step I had taken."

On the 9th of September, the boat being completed, arrangements were made for their departure, and at noon they embarked under a salute of eight guns and three cheers, which they gratefully returned, and made all sail. The route was settled to be by Cumberland House, and through the chain of Posts to the Great Slave Lake. It is not deemed necessary to notice the multitude of

lakes, rivers, portages, and the numerous difficulties and impediments which beset the traveler throughout his arduous journey in the northern regions of America, these having been so frequently described by various travelers since the time of Hearne and Mackenzie. Suffice it to say that, from the time of their leaving York Factory on the 9th of September, to their arrival at Cumberland House on the 22d of October, they had traveled over a distance of very nearly seven hundred miles, with and against the streams of some ten different rivers and nine lakes, to say nothing of rocks, rapids, and portages. The charts and views, from the observations and pencils of Messrs. Hood and Back, afford a more clear description than any written account could convey. The services of these two officers in these and other respects were of incalculable benefit, and highly spoken of by the commander of the expedition.

Nothing could exceed the kindness of the governor of Fort Cumberland: he forthwith set about enlarging the premises, to make this their intended winter quarters as convenient and agreeable as possible. But Franklin, after many conversations with Governor Williams, and other gentlemen in charge of northern posts, was convinced of the necessity of proceeding, during the winter, into the Athobasca department, to the northward of the Great Slave Lake, from whence, only, guides, hunters, and interpreters were to be procured. He therefore requested Governor Williams that he might be furnished, by the middle of January, with the means of conveyance for three persons, having previously arranged that Messrs. Back and Hepburn should accompany him, while Dr. Richardson and Mr. Hood should remain till the spring at Cumberland House.

This arrangement was quite consistent with the true character of Franklin; whenever an arduous, severe, or inconvenient service was to be performed, he was always ready to relieve the party he commanded from the burden, and to undertake it himself.

With this view, on the 18th of January, 1820, Franklin, with Back as his companion, and the faithful Hepburn, took leave of Dr. Richardson and Mr. Hood, who were to follow with their baggage in the spring. But,

before taking a brief view of the expedition of the first three to Carlton House, and thence to Fort Chipewyan, it may be expedient to glance over the proceedings of the two latter at Cumberland House, to which a chapter is separately appropriated in the narrative. The district of Cumberland is stated by Dr. Richardson to contain upward of 20,000 square miles, is peopled by about 120 Indian hunters, most of them married, with an average of five to each family, or the whole Indian population may be estimated at 2500. Their mode of life subjects them to great privations; the hooping-cough and measles at this time were spreading through the whole tribe; many died, and most of the survivors were so enfeebled as to be unable to pursue the necessary avocations of hunting and fishing; the scenes of misery were heart-rending, and the few who had escaped disease were not able to afford relief to the sufferers.

"One evening, in the month of January (says Dr. Richardson), a poor Indian entered the Northwest Company's House, carrying his only child in his arms, and followed by his starving wife. They had been hunting apart from the other bands, had been unsuccessful, and while in want were seized with the epidemical disease. An Indian is accustomed to starve, and it is not easy to elicit from him an account of his sufferings. This poor man's story was very brief; as soon as the fever abated, he set out with his wife for Cumberland House, having been previously reduced to feed on the bits of skin and offal which remained about their encampment. Even this miserable fare was exhausted, and they walked several days without eating, yet exerting themselves far beyond their strength, that they might save the life of the infant. It died almost within sight of the house. Mr. Connelly, then in charge of the post, received them with the utmost humanity, and instantly placed food before them; but no language can describe the manner in which the miserable father dashed the morsel from his lips, and deplored the loss of his child. Misery may harden a disposition naturally bad, but it never fails to soften the heart of a good man."—P. 60, 61.

A great part of the chapter is employed in a minute account of the Crees, or, as named by the French Canadians, Knisteneaux. Much curious information regarding their manners, customs, and character is developed, and apparently on correct authority, but the detail would

be out of place in the present narrative. It may suffice, therefore, to give the doctor's conclusion, where he says, "We may state the Crees to be a vain, fickle, improvident, and indolent race, and not very strict in their adherence to truth, being great boasters; but, on the other hand, they strictly regard the rights of property, are susceptible of the kinder affections, capable of friendship, very hospitable, tolerably kind to their women, and withal inclined to peace." He then gives an instance of their kind feeling toward the softer sex. "An Indian visited the fort in the winter. The poor man's wife had lost her feet by the frost: this compelled him not only to hunt, but to do all the menial offices himself, and in the winter, to drag his wife, with their stock of furniture, from one encampment to another. In the performance of this duty, as he could not keep pace with the rest of the tribe, he more than once nearly perished of hunger."

In such a mode of life, in such a country, and in such society, it would be too much to expect a state of refinement, or of moral purity, even in females of the better part of the community, especially when the male portion of it is so debased.

"The girls at the forts, particularly the daughters of Canadians, are given in marriage very young; they are very frequently wives at twelve years of age, and mothers at fourteen. Nay, more than one instance came under our observation of the master of a post having permitted a voyager to take to wife a poor child that had scarcely attained the age of ten years. The masters of posts and wintering partners of companies deemed this criminal indulgence to the vices of their servants necessary to stimulate them to exertion for the interest of their respective concerns. Another practice may also be noticed, as showing the state of moral feeling on these subjects among the white residents of the fur countries. It was not very uncommon among the Canadian voyagers for one woman to be common to, and maintained at the joint expense of, two men, nor for a voyager to sell his wife, either for a season or altogether, for a sum of money proportioned to her beauty and good qualities, but always inferior to the price of a team of dogs."—P. 86.

The products of this part of the country are noticed by Dr. Richardson. Of forest trees he mentions two species of poplar, two species of spruce-fir, three other

pines, one larch, the canoe-birch, alder, and various willows; the sugar-maple, elm, ash, and *arbor vitæ* (Thuya occidentalis). Of fruits are two species of plum; one, very astringent, is known by the name of *choke-cherry*. Currants, gooseberries, raspberries, and strawberries, common; cranberries, whortleberries, and others, plentifully met with on swampy and heathy grounds. Of the quadrupeds hunted for food are mostly the moose and the reindeer, the buffalo or bison, the red deer, jumping deer, long-tailed deer, and a species of antelope. Of the fur-bearing animals are foxes of various kinds, distinguished as *black*, *silver*, *cross*, *red*, and *blue*; the wolverine, the lynx, the marten, the fisher, the otter, and the beaver. The Indians, it appears, have nearly destroyed the fur-bearing animals; and so scarce is the beaver become, that in the whole journey to the shores of the Polar Sea and back, one single habitation, and one dam only of that industrious and ingenious creature, were met with. Among the many interesting anecdotes that have been told of this animal, Dr. Richardson relates the following:

"One day a gentleman, long resident in this country, espied five young beavers sporting in the water, leaping upon the trunk of a tree, pushing one another off, and playing a thousand interesting tricks. He approached softly under cover of the bushes, and prepared to fire on the unsuspecting creatures, but a nearer approach discovered to him such a similitude between their gestures and the infantile caresses of his own children, that he threw aside his gun. This gentleman's feelings are to be envied, but few traders in furs would have acted so feelingly."—P. 92.

It has been stated that on the 18th of January, 1820, Sir John Franklin, Mr. Back, and John Hepburn left Cumberland House for Carlton House, to proceed from thence to Fort Chipewyan, there to make preparation for proceeding to the northern coast. A circumstantial account is given of the mode of traveling, of the rivers, lakes, and portages, of the posts of the two companies, of the snows that fell, and the numerous hardships that the traveler in winter must necessarily undergo, daily and nightly, till he arrives at his destination, and the close of the spring mitigates the severity of the temper-

nature. What the state of that temperature had been from the 18th of January to the 26th of March, when the party reached Chipewyan, there is no record, for a reason explained by Franklin, who says that "this evening (18th of January) we found the mercury of our thermometer had sunk into the bulb, and was frozen. It rose again into the tube on being held to the fire, but quickly redescended into the bulb on being removed into the air; we could not, therefore, ascertain by it the temperature of the atmosphere, either then or during our journey. Mr. Hood, however, who made a journey from Cumberland House to the Basquian Hill, not far from the former, states in his journal, that on the 25th of March the thermometer fell in the open air to 15° below zero, although it rose the following day to 60° above it. The sudden changes that take place in the northern parts of North America are very remarkable. On the 15th of April Mr. Hood records that "the first shower of rain fell we had seen for six months, and on the 17th the thermometer rose to 77° in the shade." He also observes that, "on the 10th or 12th of April, the return of the swans, geese, and ducks gave certain indications of the advance of spring."

The warm weather, by the sudden melting of the snow and ice, deluged the face of the country, and gave rise to a remark of Mr. Hood, the truth of which has been proved by many well-attested facts. He says, "the noise made by the frogs which this inundation produced is almost incredible. There is strong reason to believe that they outlive the severity of winter. They have often been found frozen, and revived by warmth; nor is it possible that the multitude which incessantly filled our ears with their discordant notes could have been matured in two or three days." Strong doubts had long before this been entertained of the correctness of the fact here stated, but experiments made by competent persons proved that not only frogs, but leeches, snails, grubs, fishes, and other animals, could be frozen by artificial cold, and revived. It was farther ascertained that frogs would revive if the heart even was frozen, but that if the brain was congealed, life became so irrecoverably extinct that not only could no degree of warmth produce

symptoms of recovery, but the animal was rendered incapable of being affected by the galvanic action. "I have frequently," says Hearne, "seen frogs dug up with the moss, frozen as hard as ice, in which state the legs are as easily broken off as a pipestem; but," he adds, "if they be permitted to freeze again, they are past all recovery."

Captain Franklin also notices the resuscitation of fishes after being frozen:

"It may be worthy of notice here, that the fish froze as they were taken out of the nets, and in a short time became a solid mass of ice, and by a blow or two of the hatchet were easily split open, when the intestines might be removed in one lump. If in this completely frozen state they were thawed before the fire, they recovered their animation. This was particularly the case with the carp, and we had occasion to observe it repeatedly, as Dr. Richardson occupied himself in examining the structure of the different species of fish, and was always, in the winter, under the necessity of thawing them before he could cut them. We have seen a carp recover so far as to leap about with much vigor after it had been frozen for thirty-six hours."—P. 248.

Nay, it may be stated that the same effect is produced on the insect tribe. It is reported by Mr. Ellis, that at the Hudson's Bay factory, a black, frozen mass of a peat-like substance being brought before the fire and thawed, there came from it a cloud of living musquetoes. Captain Buchan observed myriads of insects frozen on the surface of a lake in Newfoundland, and imbodied in the solid ice; the next day, by the powerful rays of the sun, they were loosened from durance, became reanimated, and took their flight into the air.

Mr. Hood, in his journey, also makes an observation of a different kind regarding this most annoying animal.

"We had sometimes before procured a little rest by closing the tent and burning wood or flashing gunpowder within, the smoke driving the musquetoes into the crannies of the ground. But this remedy was now ineffectual, though we employed it so perseveringly as to hazard suffocation; they swarmed under our blankets, goring us with their envenomed trunks, and steeping our clothes in blood. We rose at daylight in a fever, and our misery was unmitigated during our whole stay.

"The food of the musquetoe is blood, which it can extract by penetrating the hide of a buffalo; and if it is not disturbed, it gorges itself so as to swell its body into a transparent globe. The wound does not swell like that of the African musquetoe, but it is infinitely more painful; and when multiplied a hundred fold, and continued for so many successive days, it becomes an evil of such magnitude, that cold, famine, and every other concomitant of an inhospitable climate must yield the pre-eminence to it. It chases the buffalo to the plains, irritating him to madness; and the reindeer to the sea-shore, from which they do not return till the scourge has ceased."—P. 188, 189.

To return to Captain Franklin and his companion Back. A description is given of the sledges, the coracles, the snow-shoes, and the clothing of a winter-traveler in this cold and dreary climate, a repetition of which would afford but little entertainment to the general reader. Dr. Richardson, in his account of the Crees, says that tattooing is as common among them as in the Oriental Islands, notwithstanding it is a most painful operation: "a half-breed, whose arm I amputated, declared that tattooing was not only the most painful operation of the two, but infinitely more difficult to bear, by its tediousness, having, in his case, lasted three days." Captain Franklin has also some notices of the Crees, but is more particular respecting the Stone Indians, residing near the Company's post of Carlton House; "they are more prepossessing," he says, "in their looks, but addicted to thieving, and grossly and habitually treacherous. Their countenances are affable and pleasing, their eyes large and expressive, nose aquiline, teeth white and regular, the forehead bold, the cheek-bones rather high. Their figure is usually good, above the middle size, with slender but well-proportioned limbs. Their color is a light copper, and they have a profusion of very black hair." Back has supplied a very striking portrait. They steal whatever they can, particularly horses, maintaining that they are common property sent by the Almighty for the general use of man, and therefore may be taken wherever met with. This avowed disposition calls for the strictest vigilance at the several posts.

"In the afternoon of the 26th of March we had the pleasure of arriving," says Captain Franklin, "at Fort

Chipewyan, and thus terminated a winter's journey of eight hundred and fifty-seven miles, in the progress of which there was a great intermixture of agreeable and disagreeable circumstances." The latter, he thinks, if balanced, would preponderate, and that walking in snow-shoes was among the most prominent. To the inexperienced, indeed, the suffering occasioned by walking in snow-shoes appears to be dreadful, "and can be but faintly imagined by a person who thinks upon the inconvenience of marching with a weight of between two and three pounds constantly attached to galled feet and swelled ankles." But Mr. Hood will best describe it.

"The miseries endured during the first journey of this nature are so great, that nothing could induce the sufferer to undertake a second while under the influence of present pain. He feels his frame crushed by unaccountable pressure, he drags a galling and stubborn weight at his feet, and his track is marked with blood. The dazzling scene around him affords no rest to his eye, no object to divert his attention from his own agonizing sensations. When he rises from sleep, half his body seems dead, till quickened into feeling by the irritation of his sores. But, fortunately for him, no evil makes an impression so evanescent as pain. It can not be wholly banished, nor recalled with the force of reality, by any act of the mind, either to affect our determinations, or to sympathize with another. The traveler soon forgets his sufferings, and at every future journey their recurrence is attended with diminished acuteness."—P. 173, 174.

Preparations were forthwith to be made at Chipewyan for prosecuting the main object of the expedition, and in the consultation with the principals of the two great contending companies, Franklin, by his persuasive and conciliating manners, brought about a cordial desire on the part of both to render mutual assistance to the forwarding of that object. Here, too, in the early part of July, he had the sincere gratification of welcoming his long-separated friends, Dr. Richardson and Mr. Hood, who arrived in perfect health; and he records the zeal and talents displayed by these two gentlemen, and speaks in the highest terms of approbation of the manner in which their several duties had been discharged since their separation.

The Chipewyans are the neighboring tribe of the

Stone Indians, with less promising features, but more honest, rude in their manners, and extremely superstitious. Their features also are against them; they have broad faces, projecting cheek-bones, and wide nostrils, but generally good teeth and fine eyes; they are reserved and selfish; they beg with unceasing importunity every thing they see. "I never saw men," says Franklin, "who either received or bestowed a gift with such bad grace; they almost snatch the thing from you in one instance, and throw it at you in the other." Our travelers fell in with a party of these people in the most forlorn condition, having destroyed every thing they possessed in token of grief for the severe loss they had sustained by the prevailing sickness of measles, hooping-cough, and dysentery. "It appears," says Franklin, "that no article is spared by those unhappy men when a near relative dies; their clothes and tents are cut to pieces, their guns broken, and every other weapon rendered useless, if some person do not remove those articles from their sight." As some relief, however, to the darker shades of their character, instances of theft are stated to be extremely rare among them; they also possess strong affection for their children. A curious example of this was mentioned to the party, "and so well authenticated," says Franklin, "that I shall venture to give it in the words of Dr. Richardson's Journal."

"A young Chipewyan had separated from the rest of his band for the purpose of trenching beaver, when his wife, who was his sole companion, and in her first pregnancy, was seized with the pains of labor. She died on the third day after she had given birth to a boy. The husband was inconsolable, and vowed in his anguish never to take another woman to wife, but his grief was soon in some degree absorbed in anxiety for the fate of his infant son. To preserve its life, he descended to the office of nurse, so degrading in the eyes of a Chipewyan, as partaking of the duties of a woman. He swaddled it in soft moss, fed it with broth made from the flesh of the deer, and to still its cries applied it to his breast, praying earnestly to the great Master of Life to assist his endeavors. The force of the powerful passion by which he was actuated produced the same effect in his case as it has done in some others which are recorded: a flow of milk actually took place from his breast. He succeeded in rearing his child, taught him to be a hunter, and

when he attained the age of manhood, chose him a wife from the tribe. The old man kept his vow in never taking a second wife himself, but he delighted in tending his son's children, and when his daughter-in-law used to interfere, saying that it was not the occupation of a man, he was wont to reply, that he had promised to the great Master of Life, if his child was spared, never to be proud, like the other Indians. He used to mention, too, as a certain proof of the approbation of Providence, that although he was always obliged to carry his child on his back while hunting, yet it never roused a moose by its cries, being always particularly still at those times. Our informant (Mr. Wentzel) added, that he had often seen this Indian in his old age, and that his left breast, even then, retained the unusual size it had acquired in his occupation of nurse."—P. 157, 158.

Singular as this case may appear, Dr. Richardson is quite correct in stating that there are others on record in which the same effects precisely were produced, and among which is that recorded by the Baron von Humboldt in his South American travels, and which some of the physiologists of that day pronounced to be impossible, while they were advancing and defending other stories not less miraculous. It is not safe, in this age of wonderful discoveries, to pronounce dogmatically what is and what is not possible. Physiologists, and physicians, and surgeons may say, as some have said, that man has not been gifted, as woman is, with lacteous nutriment; but common sense may lead to the presumption that both, being constituted of the same materials, and supplied with similar glands, may, by some extraordinary circumstance—"the force of powerful passion," as Dr. Richardson observes—produce like effects. The opinions of two of the most eminent physiologists may here be given. Magendie says, "Though the secretion of milk seems proper to women after parturition, it has been sometimes seen in virgins, and even in man."—(Magendie's *Physiology*.) And Richerand says, "There have been known men in whom a long-continued titillation of the breasts had determined so considerable an afflux of the humors, that there oozed from them a whitish, milky, saccharine fluid, not unlike the milk of a woman."—(Richerand's *Physiology*.) To say that a thing is impossible is a very easy, but not a convin-

cing way of settling a disputed question. When Stephenson constructed the first railroad between Liverpool and Manchester, near twenty years ago, and asserted that its speed would exceed sixteen miles an hour, it was laughed at by a great lawyer (a senior wrangler), employed against the bill, who asserted dogmatically that such a speed was impossible; but Stephenson, somewhat nettled, called out, "Instead of sixteen, I can make it sixty, if necessary." Every impediment was thrown in the way of establishing a distant electrical telegraph; but the confidence which a few had in Professor Wheatstone carried the point, and a communication can now be held with Portsmouth from London (with their two distant *termini*, even) in a very few minutes—a single signal in half a second: in fact, electricity regards neither time nor space. How many *impossibilities* would ordinary people meet with in the agencies of electricity, galvanism, and magnetism, one or all of which may almost be looked on as the life and soul of the material of our world, daily manifesting the truth that "we are yet only on the threshold of discovery"—Sir Humphrey Davy's words, uttered but a short time before his death.

To return, after this digression, to our voyagers. As soon as the number of people to be employed was completed, consisting of sixteen Canadian voyagers, their English attendant, John Hepburn, two interpreters, to be received at the Great Slave Lake, and one Chipewyan woman, and their provisions shipped, they all embarked on the 18th of July, in high glee, and the crews of the three canoes commenced a lively paddling song on leaving the shore, which was continued till out of sight of the house. On the 24th they reached Moose-deer Island, a post of the Northwest Company, and engaged Pierre St. Germain as interpreter for the Copper Indians. On the 28th they arrived at Fort Providence, situated on the northeastern side of Great Slave Lake. They found here Mr. Wentzel and the second interpreter, Jean Baptiste Adam. The duties allotted to the former were, the management of the Indians, the superintendence of the Canadian voyagers, the obtaining and distributing provisions and other stores, all of which he

was well qualified to perform, having been twenty years in the country. Here, too, they were waited on by the chief of the Indians, named Akaitcho. He made a speech, purporting that he rejoiced to see such great chiefs on his land; that his tribe was poor, but they loved white men, who had been their benefactors; said he would attend them to the end of their journey, and would do all he could to provide them with the means of subsistence. Franklin, of course, made a suitable acknowledgment in return.

On the 2d of August they left Fort Providence, on their way to the Copper Mine River, the party consisting of six Englishmen, six Canadian voyagers, and three interpreters, to which were added Akaitcho and his Indians. The details of the journey as far as Fort Enterprise, on the banks of Winter Lake, the difficulties that occurred in the navigation of the numerous rivers and lakes, and the crossing of portages, could give little or no information of interest to the general reader, and shall therefore be omitted. Suffice it to say, that after numerous difficulties, experienced from scarcity of provisions for the party that attended them, impediments of navigation, and the severe labor of the frequent portages, they were glad to arrive, on the 20th of August, after a slow and tedious progress, at the spot where it was decided to winter, and which was distant about 550 miles from Chipewyan. Captain Franklin states their journey briefly thus:

"The counted length of the portages we had crossed since leaving Fort Providence is twenty-one statute miles and a half; and as our men had to traverse each portage four times with a load of 180 pounds, and return three times light, they walked in the whole upward of one hundred and fifty miles. The total length of our voyage from Chipewyan is five hundred and fifty-three miles. In the afternoon (he says) we read divine service, and offered our thanksgiving to the Almighty for his goodness in having brought us thus far on our journey; a duty which we never neglected, when stationary, on the Sabbath."

Before the termination of the last journey, however, the Canadian voyagers became discontented, and threatened not to proceed forward unless more food was given to them; and Franklin, after addressing them in the

strongest manner on the danger of insubordination, and his determination to inflict the heaviest punishment on any who should refuse to proceed, admits that their hardships were of a kind that few would support without murmuring, and none could witness without a sincere pity for their sufferings. Relief, however, was at hand by the arrival of some hunters with the carcasses of reindeer.

On arriving at their destination, the Canadians set cordially about the erection of a house for their winter quarters, to which was given the name of *Fort Enterprise*, a name that, in reference to future events, might with great and deplorable propriety be changed to that of the "House of Misery, Lamentation, and Woe." The anxiety felt by Franklin of getting on to the northward, notwithstanding the opinion of all that the lateness of the season and the probable want of provisions would make such an attempt inexpedient, and Akaitcho having positively refused to let his Indians proceed, Franklin remonstrated with this chief; and, continuing to press the matter, he answered with some warmth:

"Well, I have said every thing I can urge to dissuade you from going on this service, on which it seems you wish to sacrifice your own lives, as well as the Indians who might attend you: however, if, after all I have said, you are determined to go, some of my young men shall join the party, because it shall not be said that we permitted you to die alone after having brought you hither; but, from the moment they embark in the canoes, I and my relatives shall lament them as dead."—P. 225.

This speech of the chief did not fail to make an impression on Franklin, who, after communicating to his officers what had passed, it was agreed by all that a party should be sent forward only for the purpose of ascertaining the distance and size of the Copper Mine River; and the two youngsters, Back and Hood, were dispatched on that service in a light canoe, having with them the interpreter, St. Germain, eight Canadians, and one Indian. Franklin, however, at all times unwilling to impose a task on others of which he did not take a share himself, says that Dr. Richardson and he determined on making a *pedestrian* excursion to the Copper Mine River, leaving Mr. Wentzel to superintend the

buildings. Accordingly, they set out on the 9th of September, and having suffered much from snow and cold, reached the Copper Mine River on the 13th, and were glad to get back to Fort Enterprise, having traversed on foot about eighty miles. On the same day Back and Hood returned from their inspection.

"I was much pleased (says Franklin) with the able manner in which these officers executed the service they had been dispatched upon, and was gratified to learn from them that their companions had conducted themselves extremely well, and borne the fatigues of the journey most cheerfully. They scarcely had ever more than sufficient fuel to boil the kettle, and were generally obliged to lie down in their wet clothes, and, consequently, suffered much from cold."—P. 237.

Soon, however, after the parties had returned to the fort, it was stated by the wintering party at Fort Enterprise that they had been apprised that the provisions they had, and were likely to obtain, would not suffice for their journey to the sea and along the coast, and that the ammunition and clothing had not come up from the southward: Mr. Back, therefore, with that zeal and activity by which he had particularly distinguished himself, volunteered to set out, on the 18th of October, with Mr. Wentzel, two Canadians, two Indians and their wives, and return to Fort Providence, and, if necessary, to Chipewyan, to obtain and hasten the required supplies. This journey was performed on foot, in the midst of winter, and was successful. Wentzel returned from Providence in the month of December, accompanied by two Esquimaux interpreters, whom they found at Fort Providence, where they had arrived from the neighborhood of Chesterfield Inlet; their long, unpronounceable names were now converted into those of Augustus and Junius; the former understood a little of the English language. Back, always alert when duty required his exertion, proceeded to Chipewyan.

Some traits of the Indian character are given in the report of his long and perilous journey, and of the conduct of the Indians, which deserve to be here noticed. A single instance may be sufficient to stamp their character. "One of the women caught a fine pike by making a hole in the ice, which she gave to us; the In-

dians positively refused to partake of it, from the idea (as we afterward learned) that we should not have sufficient for ourselves: 'we are accustomed to starvation,' said they, 'but you are not.'" The Indians and their wives complained of illness and want of rest, which induced Back to serve out to them a flagon of mixed spirits. "It was a satisfaction to me," he says, "to behold these poor creatures enjoying themselves, for they had behaved in the most exemplary and active manner toward the party, and with a generosity and sympathy seldom found even in the more civilized parts of the world; and the attention and affection which they manifested toward their wives evinced a benevolence of disposition and goodness of nature which could not fail to secure the approbation of the most indifferent observer." Another instance, while it conveys some idea of the privation to which the party were exposed with regard to food, shows the desire of the Indians, in the midst of their own sufferings, to administer to the relief of the strangers.

"One of our men caught a fish, which, with the assistance of some weed scraped from the rocks (*tripe de roche*), that affords a glutinous substance, made us a tolerable supper; it was not of the most choice kind, yet good enough for hungry men. While we were eating it I perceived one of the women busily employed scraping an old skin, with the contents of which her husband presented us. They consisted of pounded meat, fat, and a greater proportion of Indian's and deer's hair than either; and though such a mixture may not appear very alluring to an English stomach, it was thought a great luxury after three days' privation in these cheerless regions of America. Indeed, had it not been for the precaution and generosity of the Indians, we must have gone without sustenance until we reached the forts."—P. 273, 274.

Back, in this dreadful journey, was not only exposed to starvation and the extremity of cold, but also to the danger of perishing in some of the lakes which they had to cross on foot. On a narrow branch of the Slave Lake he fell through the ice, but escaped without injury; on another occasion the ice bent so that it required the utmost speed to avoid falling through where it gave way, as it seems to have done at every step he

took. In short, it was little less than miraculous, considering the season and the severity of the winter, that he ever returned safe, which, however, he had the good fortune to do on the 17th of March, when he arrived at Fort Enterprise, where, he says, "I had the pleasure of meeting my friends all in good health, after an absence of nearly five months, during which time I had traveled 1104 miles on snow-shoes, and had no other covering at night, in the woods, than a blanket and deer skin, with the thermometer frequently at —40°, and once at —57°, and sometimes passing two or three days without tasting food." Well may Franklin say, "I had every reason to be much pleased with his conduct on this arduous undertaking."

With regard to the temperature of the winter, it was not improved by the more northern situation of Fort Enterprise. Augustus spoke so highly of the warmth of a snow-house, that he was employed in the building of one, which he did after a very speedy and clever operation, and of which Captain Franklin has given a description and plan; but as Parry has supplied both, obtained from the very same people, they need not here be repeated. Franklin says, "The purity of the material of which the house was framed, the elegance of its construction, and the transparency of its walls, which transmitted a very pleasant light, gave it an appearance far superior to a marble building, and one might survey it with feelings somewhat akin to those produced by the contemplation of a Grecian temple reared by Phidias; both are triumphs of art, inimitable in their kinds." Like many of the Grecian temples, they too are covered by domes, built on the principle of an arch, which is perfectly understood by them. We have had many learned disquisitions on the origin of the arch, which some say was copied from nature; the poor isolated Esquimaux, evidently an original people, unlike to any other in physical appearance, had nature only to consult, in which, with their own ingenuity, as we have learned from Parry, they are by no means deficient.

In December, Franklin has given a statement of the severity of the cold, which is not more intense than Back experienced:

"The weather during this month was the coldest we experienced during our residence in America. The thermometer sunk on one occasion to 57° below zero, and never rose beyond 6° above it; the mean for the month was —29°·7. During these intense colds, however, the atmosphere was generally calm, and the wood-cutters and others went about their ordinary occupations without using any extraordinary precautions, yet without feeling any bad effects. They had their reindeer shirts on, leathern mittens lined with blankets, and furred caps; but none of them used any defense for the face, nor did they need to do so. Indeed we have already mentioned that the heat is abstracted most rapidly from the body during strong breezes; and most of those who have perished from cold in this country have fallen a sacrifice to their being overtaken on a lake, or other unsheltered place, by a storm of wind. The intense colds were, however, detrimental to us in another way. The trees froze to their very centers, and became as hard as stones, and more difficult to cut. Some of the axes were broken daily, and by the end of the month we had only one left that was fit for felling trees. By intrusting it only to one of the party who had been bred a carpenter, and who could use it with dexterity, it was fortunately preserved until the arrival of our men with others from Fort Providence.

"A thermometer, hung in our bedroom at the distance of sixteen feet from the fire, but exposed to its direct radiation, stood, even in the daytime, occasionally at 15° below zero, and was observed more than once, previous to the kindling of the fire in the morning, to be as low as 40° below zero. On two of these occasions, the chronometers (Nos. 2149 and 2151), which during the night lay under Mr. Hood's and Dr. Richardson's pillows, stopped while they were dressing themselves."—P. 254, 255.

In one of the families that frequented the house was a good-looking girl, concerning whom Captain Franklin gives the following anecdote:

"I may remark, that the daughter, whom we designated Green-stockings, from her dress, is considered by her tribe to be a great beauty. Mr. Hood drew an accurate portrait of her, although her mother was averse from her sitting for it. She was afraid, she said, that her daughter's likeness would induce the Great Chief who resided in England to send for the original. The young lady, however, was undeterred by any such fear. She has already been an object of contest between her countrymen, and, although under sixteen years of age, has belonged successively to two husbands, and would

probably have been the wife of many more, if her mother had not required her services as a nurse."—P. 254.

The ingenious methods pursued by Captain Parry in his winter's abode in the Arctic regions, for the amusement and occupation of his people, were not known to Captain Franklin; but he equally found it necessary, during the dreary months they were shut up in Fort Enterprise, to furnish some kind of employment, especially for the officers of the expedition, who, however, were at no loss; they were engaged in writing out their journals, calculating the results of their observations, and in constructing the charts of the routes, while Messrs. Hood and Back were employed in finishing their drawings. The reading of newspapers, magazines, and letters from England was a source of occupation. But Captain Franklin has given a sketch, which contains the usual routine of their winter's life at Fort Enterprise.

"In the evenings we joined the men in the hall, and took a part in their games, which generally continued to a late hour; in short, we never found the time to hang heavy upon our hands; and the peculiar occupations of each of the officers afforded them more employment than might at first be supposed. I recalculated the observations made on our route; Mr. Hood protracted the charts, and made those drawings of birds, plants, and fishes, which can not appear in this work, but which have been the admiration of every one who has seen them. Each of the party sedulously and separately recorded their observations on the aurora, and Dr. Richardson contrived to obtain from under the snow specimens of most of the lichens in the neighborhood, and to make himself acquainted with the mineralogy of the surrounding country.

"The Sabbath was always a day of rest with us; the woodmen were required to provide for the exigencies of that day on Saturday, and the party were dressed in their best attire. Divine service was regularly performed, and the Canadians attended, and behaved with great decorum, although they were all Roman Catholics, and but little acquainted with the language in which the prayers were read. I regretted much that we had not a French Prayer-Book, but the Lord's Prayer and Creed were always read to them in their own language.

"Our diet consisted almost entirely of reindeer meat, varied twice a week by fish, and occasionally by a little flour, but we had no vegetables of any description. On the Sunday mornings we drank a cup of chocolate; but our greatest luxury was tea (without sugar), of which we regularly partook

twice a day. With reindeer's fat and strips of cotton shirts, we formed candles; and Hepburn acquired considerable skill in the manufacture of soap, from the wood-ashes, fat, and salt. The formation of soap was considered as rather a mysterious operation by our Canadians, and in their hands was always supposed to fail if a woman approached the kettle in which the ley was boiling. Such are our simple domestic details."—P. 258, 259.

The aurora borealis made its appearance frequently, with more or less brilliancy, but was not particularly remarkable; in the month of December it was visible twenty-eight of the long nights. Mr. Back gives, in the narrative of his journey, the following extraordinary account, which he received from one of the partners of the Northwest Company, but he does not vouch for the truth of it. "He was traveling in a canoe in the English River, and had landed near the Kettle Fall, when the coruscations of the aurora were so vivid and low, that the Canadians fell on their faces, and began praying and crying, fearing they should be killed; he himself threw away his gun and knife, that they might not attract the flashes, for they were within two feet of the earth, flitting along with incredible swiftness, and moving parallel to its surface. They continued for upward of five minutes, as near as he could judge, and made a loud rustling noise, like the waving of a flag in a strong breeze. After they had ceased the sky became clear, with little wind."

Captain Franklin, Dr. Richardson, and Mr. Hood were most attentive observers of the aurora. Captain Franklin says that, having observed the aurora upward of two hundred times, he is not able to attest the fact of the noise ascribed to it. Mr. Back, when on his journey, the night being fine, says, "the aurora was so vivid, that we imagined more than once that we heard a rustling noise, like that of autumnal leaves stirred by the wind; but after two hours of attentive listening we were not entirely convinced of the fact." They all agree as to its influence over the magnetic needle. By a number of experiments, it was found that, in certain positions of the beams and arches, the needle was considerably drawn aside, and more particularly when the flashes were between the clouds and the earth; for it was also ascer-

tained that the height of the aurora, instead of being, as supposed by Mr. Dalton and others, beyond the region of the atmosphere, is usually not more than six or seven miles from the earth. "We have sometimes seen," Mr. Hood says, "an attenuated aurora flashing across a hundred degrees of the sky in a single second; a quickness of motion inconsistent with the height of sixty or seventy miles, the least which has hitherto been ascribed to it."

On the 1st of January, 1821, the usual festivities of the new year were held. The only treat the people could receive was a little flour and fat, both luxuries; but the feast languished for want of spirits. The whole month was cold and foggy, yet the Indians declared it was the warmest they had known; the thermometer, however, toward the latter part, descended to 49°, and the mean temperature of the month was 15°·6. On the 15th large supplies were received from Fort Providence, and the people had their ration of spirits served out to them.

Toward the end of March two Indians arrived from The Hook, a chief next to Akaitcho in authority among the Copper Indians: his band were stationed between the Marten and Great Bear Lakes; they brought offers from him to supply dried meat on the banks of the Copper Mine River, in return for goods and ammunition. The offer was declined, but they were desired to tell him that notes on the Northwest Company's post would be given for either provisions or leather when they met. Even at this period, Franklin says, "the hunters sent us no supplies; our net produced very few fish, and the pounded meat intended to keep for summer use was nearly expended. Our meals at this period were always scanty, and we were occasionally restricted to one in the day."

But the Indian families which congregated about the house, consisting principally of women and children, suffered the most.

"I had often requested them to move to Akaitcho's lodge, where they were more certain of receiving supplies; but as most of them were sick or infirm, they did not like to quit the house, where they daily received medicines from Dr. Richardson, to encounter the fatigue of following the movements of a hunting-camp. They cleared away the snow on

the site of the autumn encampments to look for bones, deer's feet, bits of hide, and other offal. When we beheld them gnawing the pieces of hide, and pounding the bones for the purpose of extracting some nourishment from them by boiling, we regretted our inability to relieve them, but little thought that we should ourselves be afterward driven to the necessity of eagerly collecting these same bones a second time from the dunghill."—P. 293.

The weather in May became warm, and the approach of spring was agreeably confirmed by the gradual appearance of various kinds of birds and of reindeer. The average temperature for the month was about 32°, the greatest heat 68°, and the lowest 18°; at the end of the month the sun did not set. Preparations were now made for the long journey down the Copper Mine River to the coast of the Polar Sea, and along it to the eastward. The first party started on the 4th of June, under the charge of Dr. Richardson, consisting of twenty-three persons, exclusive of children. Among them were fifteen Canadian voyagers. A promise was made by Akaitcho, in presence of Mr. Wentzel and the Indians, that a deposit of provisions should be made at this place, Fort Enterprise, previous to next September, as a resource should the party return by this way; and Wentzel undertook to see this done.

On the 14th of June, all being completed, Captain Franklin set off with three canoes, dragged by four men each, and two dogs. The stores, the instruments, and the small stock of dried meat, amounting only to eighty pounds, were distributed equally among Hepburn, three Canadians, and the two Esquimaux, Junius and Augustus. All the party set out on foot. On crossing a small lake, Franklin fell in through the ice, and soon after Back did the same, and Junius also, with a heavy burden on his back, but none of them were hurt. It was not till the 21st that Franklin's party joined Dr. Richardson at Point Lake. To ease the men who had carried the canoes, the third canoe was left here, as by doing this three men were gained to assist those who had become lame.

It were tedious, and not very interesting, to repeat the details of the journey over lakes, down rapids and cataracts, over portages, and across a hilly country,

dreadfully fatiguing to the men, or to relate the alternate successes and disappointments of the hunters. It is enough to say that on the 30th of June they embarked on the Copper Mine River, which, at a point called Rock-nest, is stated to be about two hundred yards wide, ten feet deep, and to flow very rapidly over a rocky bottom; its banks picturesque, the hills shelving to the water side, well covered with wood, and the surface of the rocks richly clothed with lichens. Musk-oxen were here very plentiful near the river, and in all this part of the country; and, like the buffalo, herd together in bands, so that one day the hunters killed eight cows. It is said that when two or three men get so near a herd as to fire at them from different points, instead of separating or running away, these animals huddle closer together, and several are generally killed; but if the wound be not mortal, they become enraged, and dart in the most furious manner at the hunters, who must be very dexterous to evade them.

On the 7th of July they arrived at *The Hook's* encampment, the Indian chief before mentioned, who was particularly civil, and said, "The amount of meat I have is very small, but I will cheerfully give you what I have; we are too much indebted to the white people to allow them to want food on our lands while we have any to give them;" and he promised to remain on the side of the Bear Lake, which is near to the Copper Mine River, till the month of November, and to furnish the party with supplies on their return. He too, as well as all the Indians, earnestly entreated the travelers to be constantly on their guard against the treachery of the Esquimaux.

They were now approaching the Copper Mountains, their encampment being in lat. 67° 1′ 10″, long. 116° 27′ 28″ W.; variation of the compass, 44° 11′ 43″, and dip of the needle, 87° 31′ 18″. From hence they visited the Copper Mountains in search of specimens of the ore, agreeably, as Franklin says, with his instructions; the party consisting of twenty-one persons, voyagers and Indians, including the officers.

"We traveled for nine hours over a considerable space of ground, but found only a few small pieces of native copper. The mountains varied in height from 1200 to 1500 feet; their

uniformity is interrupted by narrow valleys traversed by small streams. The best specimens of metal we procured were among the stones in these valleys, and it was in such situations that our guides desired us to search most carefully. It would appear, that when the Indians see any sparry substance projecting above the surface, they dig there, but they have no other rule to direct them, and have never found the metal in its original repository. Our guides reported that they had found copper in large pieces in every part of this range for two days' walk to the northwest, and that the Esquimaux come hither to search for it. The annual visits which the Copper Indians were accustomed to make to these mountains, when most of their weapons and utensils were made of copper, have been discontinued since they have been enabled to obtain a supply of ice-chisels and other instruments of iron, by the establishment of trading-posts near their hunting-grounds."*—P. 340.

They now descended to that part of the river named by Hearne the Bloody Fall. This rapid is described as a sort of shelving cascade, about three hundred yards in length, having a descent of from ten to fifteen feet, and bounded on each side by high walls of red sandstone, upon which rests a series of lofty green hills. Here they caught forty excellent salmon and white fish, in a single net, below the rapid. No trees had been seen in this day's journey; but the ground is well clothed with grass, and nourishes most of the shrubs and berry-bearing plants that were met with north of Fort Enterprise.

After much discussion, and great apprehension on the part of the Indians and voyagers, regarding the hostility of the Esquimaux, in order to allay their fears, Junius and Augustus were sent on to have a communication with them; a very small party were fallen in with at the rapid described by Hearne, their usual resort; they found them to be mild, peaceable creatures, and but too glad to be on terms of friendship with the Indians. They consisted only of four men and as many women, who at night disappeared, having seen, it is supposed, some of Akaitcho's Indians, who had unauthorizedly followed, contrary to their chief's promise, and shown themselves on the hills. It was at this place where Hearne describes the dreadful massacre of the Esquimaux by the

* Among Dr. Richardson's Geognostical Observations, a circumstantial account of the Copper Mountains will be found.—*Appendix, No.* 1.

Chipewyan Indians, and therefore named it the "Bloody Fall." On Franklin and the party approaching it and encamping, nine Esquimaux appeared on the opposite bank of the river, carrying their canoes on their backs; but they fled on seeing the tents. Not only were these people alarmed, but the Indians also were so terrified that they insisted on returning the next day; nor could Franklin prevail on two hunters to remain with him. The reduced party, however, proceeded, and on the 18th of July reached the sea-coast at the mouth of the Copper Mine River, it being only nine miles from the Bloody Fall. The Canadian voyagers were amused with their first view of the sea, and the seals swimming about, but soon gave way to despondency; they were terrified at the idea of a voyage through an icy sea in bark canoes. Hepburn's remarks, however, and the way in which he held up to them the delights of his accustomed element, made them ashamed of their fears. The party who proceeded amounted to twenty persons. The traveling distance from Fort Enterprise to the mouth of the river is said to be about three hundred and thirty-four miles. The canoes and baggage were dragged over snow and ice for one hundred and seventeen miles of this distance. They encamped at ten on the western bank, at its junction with the sea. The river is here about a mile wide, but very shallow. High and numerous islands to seaward fill the horizon in several points of the compass; the water was decidedly salt, and Franklin thinks that Hearne could have tasted it only at the mouth of the river, as he pronounced it merely brackish.

The embarcation in two birch-bark canoes for a navigation along the southern coast of the Polar Sea to the eastward, and the commencement of the voyage, took place on the 21st of July, their dried meat and other provisions amounting only to fifteen days' consumption. They paddled all day along the coast, within a crowded range of islands, with very little ice; the coast covered with vegetation; the islands rocky and barren; abundance of drift-wood; and as none comes down the Copper Mine River, nor down any other, except Mackenzie's River, it was inferred that an easterly current prevailed. The least depth of water, after two days' sail-

ing, was six fathoms, and any ship might pass safely between the islands and the main. After a run of thirty-seven miles, they encamped; the coast well covered with vegetation of moderate height, and easy of approach. To two groups of islands the names of Berens and Sir Graham Moore were given. Some muscle-shells were seen here, the only shells met with on the whole coast. On the 22d the shore became exceedingly rocky and sterile, ending in a steep projecting promontory margined with ice. Another group of islands was named Lawford.

On the 23d and 24th, nothing material; a deer was killed; the current was running to the eastward at the rate of two miles an hour.

25th. Thunder and rain during the night; the nets supplied only three salmon-trout. For the last two days the tide rose and fell about nine inches.

26th. A dreary coast; encamped in an inlet, into which much ice had drifted, and one of the canoes got enclosed in it. "That none of this ice survives the summer was evident from the rapidity of its decay, and because no ice of last year's formation was hanging on the rocks." Detention Harbor is stated to be a secure anchorage, sheltered from every wind, but it does not appear to be noticed on the chart.

28th. Discovered, to their great mortification, that two bags of pemmican had become moldy; that the beef was scarcely eatable; but it was not so much the quality as the diminution that was the cause of uneasiness. A small vein of galena was discovered traversing gneiss rocks, but they had no means of smelting it for balls. The next day they crossed the mouth of a bay filled with ice, and on the

30th, Another bay, which they named Arctic Sound, with a river at the bottom of it, to which Franklin gave the name of Hood, "as a small tribute to the memory of our lamented friend and companion." Their provision being now reduced to eight days' consumption, it became necessary to seek a supply. The hunters were therefore sent on shore.

August 1st. The hunters returned with two small deer and a brown bear. They were now, and, in point of fact, had been some time, coasting and landing on the

shore of a very wide and deep gulf, with numerous inlets issuing in various directions, with creeks and rivers branching out from and others running into them. In the present situation of the party, living from hand to mouth, and without any certainty of a supply, nothing more than an outline could be taken of these inlets, from twenty to sixty miles deep; but pains appear to have been bestowed by Franklin, Back, and Hood to make them as correct as time would allow. One of these numerous branches was named Melville, and is stated to be thirty miles from east to west, and twenty from north to south; and Bathurst's Inlet is not less than seventy miles long. These, however, as occasional receptacles of ice, are not to be considered as refuge harbors for ships.

Having surrounded this gulf, called Coronation Gulf on the chart, Franklin, Richardson, and Back walked along the southern coast of the Polar Sea ten miles, and finding its trending to be still to the east, they named the spot Point Turn-again, being well satisfied that it was more than probable this point would prove the termination of the voyage. "It was evident," says Franklin, "that the time spent in exploring the Arctic and Melville Sounds, and Bathurst's Inlet (all branching out of and a portion of the great gulf), had precluded the hope of reaching Repulse Bay, which at the outset of the voyage we had fondly cherished; and it was equally obvious that, as our distance from any of the trading establishments would increase as we proceeded, the hazardous traverse across the barren grounds which we should have to make, if compelled to abandon the canoes upon any part of the coast, would become greater." But the greatest hazard of all, and it was wofully experienced, was the miserable pittance of provisions remaining.

Many circumstances concurred to convince the party that farther exploration would be vain, one of the canoes being already rendered useless, and the second nearly as bad; the quantity of pemmican was reduced to three days' consumption, and apprehensions for their safety had seriously possessed the minds of the voyagers and interpreters. A violent storm and its effect on the sea did not increase their desire of remaining longer.

"Though it will appear from the chart," says Franklin, "that the position of Point Turn-again is only six degrees and a half to the east of the mouth of the Copper Mine River, we sailed, in tracing the deeply-indented coast, five hundred and fifty-five geographical miles, which is little less than the direct distance between the Copper Mine River and Repulse Bay, supposing the latter to be in the longitude assigned to it by Middleton."

Captain Franklin mentions that Arctic Sound appeared the most convenient, and, perhaps, the best place for ships to anchor that he had seen along the coast, at this season especially, when they might increase their stock of provision if supplied with good marksmen. Deer are numerous in its vicinity; musk-oxen also may be found up Hood's River, and the fine, sandy bottom of the bays promises favorably for fishing with the sein. The hills on the western side are even in their outline, and slope gradually to the water's edge.

Franklin farther says that the portion of the sea over which he had passed is navigable for vessels of any size. The ice he met, particularly after leaving Detention Harbor, would not have arrested a strong boat. The chain of islands affords shelter from all heavy seas, and there are good harbors at convenient distances. It is to be hoped, however, that Captain Franklin, on his present voyage, may not be driven to seek shelter, with the Erebus and Terror, in any part of the southern coast of the Polar Sea.

The arrangement made for returning by the way he had come Captain Franklin now perceived would not be advisable. The country between Cape Barrow and Copper Mine River would not supply their wants; the canoes were unfit to encounter the sea; the bad season was rapidly advancing, when heavy gales were to be expected. "I determined, therefore," he says, "to make at once for Arctic Sound, where game had been found more plentiful than in any other place; and entering Hood's River, to advance up it as far as navigable, and then to construct small canoes out of the materials of the larger and damaged ones, which could be carried, in crossing the barren grounds, to Fort Enterprise." They had before them a chilling prospect on finding, on the

20th of this month, the pools of water frozen over, the ground covered with snow, and the thermometer down to the freezing-point at midday. The hunters went out, but saw no animals. "We made a scanty meal off a handful of pemmican, after which only a half a bag remained."

Bad as the canoes had become, and boisterous as the weather was, these voyagers contrived to paddle across the arms of lakes and inlets within the great gulf; but there was no game to be had; the berries, however, were ripe and plentiful; and, with the addition of some country tea (*Ledum palustre*), furnished a supper. Having crossed the eastern entrance of Bathurst's Inlet to an island, the deer were found to be plentiful, and two were killed. The wind changed to a quarter which enabled the party to steer for Hood's River, from the mouth of which they ascended as high as the first rapid, and encamped. This was on the 26th of August; "and here," says Franklin, "terminated our voyage on the Arctic Sea, during which we had gone over six hundred and fifty geographical miles." "Our Canadian voyagers," he adds, "could not restrain their joy at having turned their backs on the sea, and they spent the evening in talking over their past adventures, with much humor and no little exaggeration. It is due to their character to mention that they displayed much courage in encountering the dangers of the sea, magnified to them by their novelty."

At a few miles up Hood's River, it runs for about a mile through a narrow chasm, the walls of which are upward of two hundred feet in height, and quite perpendicular. Through this chasm the river precipitates itself in two magnificent falls, close to each other. Franklin named these cascades "Wilberforce Falls," as a tribute of his respect for that distinguished Christian philanthropist. The large canoes not being suited to this river, two smaller ones were constructed out of their materials, each sufficient to contain three persons, to be used for the purpose of crossing any river that might obstruct their progress.

The construction of the new canoes detained them till the 1st of September when it was decided to make

a direct line to Point Lake, distant only 149 miles in a straight line from where they were. Having proceeded twelve miles, a snow-storm obliged them to encamp, and on the 3d the last piece of pemmican and a little arrow-root were distributed for supper. The violence of the storm continued till the 7th; and for several days, having nothing to eat, and no means of making a fire, they remained whole days in bed. The wind continued so strong and the weather so severe, that there was no chance of getting on. A temperature of 20°, without fire, the party weak from fasting, their garments stiffened by frost, and the ground covered with ice and snow, rendered their condition very unfit for traveling in such a country. On trying to proceed, Franklin was seized with a fainting-fit, in consequence of exhaustion and sudden exposure to the wind, but on eating a morsel of portable soup he recovered. "I was unwilling," says this brave fellow, "at first to take this morsel of soup, which was diminishing the small and only remaining meal for the party, but several of the men urged me to it with much kindness." The canoe-carriers were frequently blown down, and one of these machines was broken to pieces, which, however, was turned to the best account, by making a fire of it to cook the remnant of portable soup and arrow-root: a scanty meal after three days' fasting, but it served to allay the pangs of hunger.

The next two days the surface of the barren grounds was covered with large stones, bearing a lichen which the Canadians call *tripe de roche*, or rock-tripe, a substance to which the present travelers may be said to owe their safety and existence; without it they must have died of starvation. By botanists this plant is called *Gyrophora*, from its circular form, and the surface of the leaf being marked with curved lines, and of which Dr. Richardson has described and engraved four species, with this observation: "We used all four as articles of food; but, not having the means of extracting the bitter principle from them, they proved nauseous to all, and noxious to several of the party, producing severe bowel complaints." This, with half a partridge to each, furnished their supper.

On the 8th the passage of a river was effected by

means of a range of large rocks at the foot of a rapid. The people who carried heavy burdens mostly slipped into the stream, and were drenched from head to foot; and all being wet to the middle, and the thermometer at 17°, their clothes became stiff with the frost, disabling them from walking without much pain.

On the 10th they came upon a herd of musk-oxen, of which the hunters killed one of the largest, a cow, which infused spirit into the starving party. "This," says Franklin, "was the sixth day since we had enjoyed a good meal; the *tripe de roche*, even where we got enough, only serving to allay the pangs of hunger for a short time."

On the 12th the severity of the weather abated, so as to allow them to go forward, but the whole party complained of faintness, and of more weakness than they had ever before done. Their supper consisted of a single partridge, accompanied with some rock-tripe, which afforded little relief, and the latter had become quite nauseous to all, and in several produced bowel complaints, to Mr. Hood in particular. It was now obvious that the whole party were getting weaker every day. It was discovered also that some of them had thrown away the fishing-nets and burned the floats, depriving them, by this thoughtless act, of the means of obtaining a supply of fish, which might be expected while coasting the margins of the several lakes they would have to pass.

On the morning of the 14th, while the officers were assembled round a small fire, Perrault, one of the voyagers, presented each of them with a small piece of meat, which he had saved from his allowance. "It was received," says Franklin, "with great thankfulness, and such an act of self-denial and kindness, being totally unexpected in a Canadian voyager, filled our eyes with tears." On the same day, Franklin, St. Germain, and Belanger embarked in the remaining canoe to cross a river, and when in the midst of it, the current and a strong breeze drove the canoe to the very brink of a tremendous rapid, of which a most frightful account is given: Belanger, unluckily, applied his paddle to avert the danger of being forced down the rapid; he lost his balance, the canoe overset in the midst of the rapid, but

the party kept hold of it till it came in contact with a rock, on which the water was not higher than their waists. Belanger remained on the rock; the other two, on the third attempt, got to the shore. After many fruitless attempts, a small line was thrown to Belanger, and he was dragged through the rapid in a perfectly senseless state, from which, by the attention of Dr. Richardson, he was, after a long time, recovered. By this accident Franklin lost his portfolio, containing his journal and observations from Fort Enterprise; but the loss, he says, was well supplied by his companions, Richardson, Back, and Hood.

On the 16th and 17th, by passing over a rugged country, their toil and suffering were greatly increased; on the latter day they had no breakfast, and but a scanty supper, yet Franklin says they allayed the pangs of hunger by pieces of singed hide and a little *tripe de roche*. "These would have satisfied us in ordinary times, but we were now almost exhausted by slender fare and travel, and our appetites had become ravenous. We looked, however, with humble confidence to the Great Author and Giver of all good, for a continuance of the support which had hitherto been always supplied to us at our greatest need."

On the 18th, Franklin says, "the want of *tripe de roche* caused us to go supperless to bed." The next day they came to a spot where there was some of that weed, which they collected, and breakfasted on. Mr. Hood was now so feeble that Dr. Richardson walked with him at a gentle pace in the rear of the party. "In the evening," says Franklin, "we had a small quantity of the *tripe*, and the rest of our supper was made up of scraps of roasted leather;" and he adds, "previous to setting out, the whole party ate the remains of their old shoes, and whatever scraps of leather they had, to strengthen their stomachs for the fatigue of the day's journey."

The 19th supplied them only with Iceland moss, boiled for their supper, which, not being soaked, proved too bitter to be taken in more than a few spoonfuls; no rock-tripe was to be found. On this day one of the renewed canoes was broken by the fall of the person

who had it in charge. For several days after this their progress was slow, over a hilly country, and the men became impatient, and so indifferent, that the two who had the charge of the only remaining canoe left it behind, urging an excuse that it had a fall, was completely broken, and useless. They refused to return and bring it up, broken as it was; they refused to make any exertion, and acted as if they had given up all hope of preservation.

On the 21st the men took it into their heads that the party had lost their way, and a gloom was spread over every countenance. Dr. Richardson had suffered so much from cold, fatigue, and hunger as to be obliged to deposit his specimens of plants and minerals, collected on the sea-coast, being unable to carry them any farther.

Things continued in this deplorable state till the 24th, when the killing of five small deer out of a large herd reanimated the drooping spirits of the men, and they asked for a day's rest, which was considered reasonable enough, that the quiet enjoyment of two substantial meals, after eight day's famine, might enable them to proceed more vigorously. On the 26th they reached a branch of the Copper Mine River; and now, for the first time, the people were convinced of their folly in breaking the two canoes.

Back, the most active and vigorous of the party, was sent forward with some of the hunters to apprise the people at Fort Enterprise of the approach of the rest. Credit and Junius followed them also to hunt. Credit returned, but Junius was missing, and was never after heard of. Several days were here lost in making a raft of willows, which was finished by the 29th, but all attempts to convey the raft across the stream failed, and the scheme was considered hopeless: the raft, moreover, was of green wood, and the want of poles or paddles rendered the moving of it on the water impracticable. Yet it was of the utmost importance to cross the river, as any attempt to go round the lakes would be sure destruction to the whole party, in their famished and worn down state; two of them, having been utterly unable to proceed, were left behind.

"In this hopeless condition with certain starvation staring

them in the face, Dr. Richardson, actuated by the noble desire of making a last effort for the safety of the party, and of relieving his suffering companions from a state of misery, which could only terminate, and that speedily, in death, volunteered to make the attempt to swim across the stream, carrying with him a line by which the raft might be hauled over.

"He lanched into the stream with the line round his middle, but when he had got to a short distance from the opposite bank, his arms became benumbed with cold, and he lost the power of moving them; still he persevered, and turning on his back, had nearly gained the opposite shore, when his legs also became powerless, and, to our infinite alarm, we beheld him sink. We instantly hauled upon the line, and he came again on the surface, and was gradually drawn ashore in an almost lifeless state. Being rolled up in blankets, he was placed before a good fire of willows, and, fortunately, was just able to speak sufficiently to give some slight directions respecting the manner of treating him. He recovered strength gradually, and, through the blessing of God, was enabled in the course of a few hours to converse, and by the evening was sufficiently recovered to remove into the tent. We then regretted to learn that the skin of his whole left side was deprived of feeling, in consequence of exposure to too great heat. He did not perfectly recover the sensation of that side until the following summer. I can not describe what every one felt at beholding the skeleton which the doctor's debilitated frame exhibited. When he stripped, the Canadians simultaneously exclaimed, '*Ah! que nous sommes maigres!*' I shall best explain his state and that of the party by the following extract from his journal: 'It may be worthy of remark, that I should have had little hesitation in any former period of my life at plunging into water even below 38° Fahrenheit, but at this time I was reduced almost to skin and bone, and, like the rest of the party, suffered from degrees of cold that would have been disregarded in health and vigor. During the whole of our march we experienced that no quantity of clothing would keep us warm while we fasted; but on those occasions on which we were enabled to go to bed with full stomachs, we passed the night in a warm and comfortable manner.'" Franklin adds, "In following the detail of our friend's narrow escape, I have omitted to mention, that when he was about to step into the water he put his foot on a dagger, which cut him to the bone; but this misfortune could not stop him from attempting the execution of his generous undertaking."—P. 424, 425.

Eight large fagots of dry willows were now prepared,

and found to be buoyant, and a cheerful supper of rock-tripe gave confidence to the desponding people for a time; but nothing came in from the hunters, except that one of them brought in the antlers and back-bone of a deer, which the wolves and birds of prey had picked clean, a small quantity of the spinal marrow only remaining. This, though putrid, was esteemed a valuable prize, and was distributed in equal portions, but found to be so acrid as to excoriate the lips; the bones, made friable by burning, were also eaten. Augustus and Back returned, having traced the shore of the lake fifteen miles, and, despairing of continuing the tour of it, thought it best to attempt to cross the river at this place.

They were now reduced to the last degree of starvation, the men again extremely despondent; a settled gloom hung over them: they refused to collect rock-tripe, preferring to fast rather than to make any exertion. The river was still to be crossed, and the willow-raft having failed, a canoe was to be made from the rafts and covered with canvas, but was not yet finished. In short, the extreme degree of starvation was at hand. Franklin thus describes their deplorable condition:

"I set out with the intention of going to St. Germain to hasten his operations, but though it was only three quarters of a mile distant, I spent three hours in a vain attempt to reach him, my strength being unequal to the labor of wading through the deep snow, and I returned quite exhausted and much shaken by the numerous falls I had got. My associates were all in the same debilitated state; and poor Hood was reduced to a perfect shadow, from the severe bowel complaints which the *tripe de roche* never failed to give him. Back was so feeble as to require the support of a stick in walking; and Dr. Richardson had lameness superadded to weakness. The voyagers were somewhat stronger than ourselves, but more indisposed to exertion, on account of their despondency. The sensation of hunger was no longer felt by any of us, yet we were scarcely able to converse upon any other subject than the pleasures of eating. We were much indebted to Hepburn at this crisis. The officers were unable, from weakness, to gather *tripe de roche* themselves, and Samandré, who had acted as our cook on the journey from the coast, sharing in the despair of the rest of the Canadians, refused to make the slightest exertion. Hepburn, on the contrary, animated by a

firm reliance on the beneficence of the Supreme Being, tempered with resignation to His will, was indefatigable in his exertions to serve us, and daily collected all the *tripe de roche* that was used in the officers' mess."—P. 427, 428.

On the 4th of October they all safely landed on the southern bank of the river, one at a time, the canoe being drawn back again in succession till all were got over, without any serious accident. Yet several of the men were wholly unable to proceed a day's journey, and three or four had fallen or lay down, and were left behind. Dr. Richardson and Mr. Hood, with their usual feelings of humanity, proposed to remain to take care of, and to bring up, the disabled to a spot where there was a thicket of willows and a supply of rock-tripe. John Hepburn, the kindest of mortals, volunteered to remain with them; but, though his assistance was too much needed elsewhere, Franklin, with his characteristic feeling, suffered him to remain, as being the best assistant Dr. Richardson could have in taking care of those who were disabled. Franklin was most unwilling to part with any of his comrades, but saw the necessity of doing so. "And after," he says, "we had united in thanksgiving and prayers to Almighty God, I separated from my companions, deeply afflicted that a train of melancholy circumstances should have demanded of me the severe trial of parting, in such a condition, from friends who had become endeared to me by their constant kindness and co-operation, and a participation of numerous sufferings." The parting took place on the 7th of October, at the distance of about twenty-four miles from Fort Enterprise.

The party who proceeded with Captain Franklin consisted of eight persons. Two of the Canadians, Belanger and Michel, on the first day's journey declared themselves unable to proceed, and begged most earnestly to go back to the party left behind, which was granted. Two more were seized with dizziness, and betrayed other symptoms of extreme debility; one of them, bursting into tears, declared his inability to go on, and the other, the next day, was completely exhausted; each, at his own request, was permitted to return to Dr. Richardson's encampment, where fire and rock-

tripe were to be obtained. One of them, however (Michel, the Iroquois), only arrived; the other three were no more heard of; and fortunate indeed would it have been if the survivor had perished with the rest.

Franklin's party was now reduced to five; the last that parted from him was one of the most faithful, and for whom he had a sincere regard; his name was Antonio Fontano, an Italian, who had served many years in De Meuron's regiment. The poor fellow, on taking leave, had entreated Franklin, should he survive, to take him to England, to put him in the way of reaching home. The five remaining were Franklin, Adam, Peltier, Benoit, and Samandré. The sufferings on the journey met with no alleviation till that of the last day, when they enjoyed the comfort of a large fire, the first deserving that name since leaving the coast; but there was no "*tripe de roche;* "and we drank tea and ate some of our shoes for supper." "The next morning," he says, "with our minds agitated between hope and fear, we went silently forward, but on reaching the long and ardently wished-for Fort Enterprise, to our infinite disappointment and grief, we found it a perfectly desolate habitation; no provisions—no Wentzel—not a trace of any living animal." A note from Back only stated that he had arrived two days before, and was looking for the Indians. This was so unsatisfactory, that Franklin decided coolly and deliberately to go himself in a few days, with Benoit and Augustus,* to Fort Providence. In the mean time, it was absolutely necessary to look out for something to subsist upon, and "we were gratified," he says, "to find several deer skins which had been thrown away during our former residence; the bones were gathered from the heap of ashes; these, with the skins, and the addition of *tripe de roche*, we considered would support us tolerably well for a time." In a few days Franklin set out on his journey, but found himself so weak as to have gone only four miles in six hours; the next morning he fell between two rocks, and broke his snow-shoes; finding himself so exhausted, he let his two companions

* Augustus was not one of the five who proceeded to this place. On their departure Franklin says, "Augustus did not make his appearance, but we felt no alarm at his absence." No doubt he had followed alone to the fort, and Franklin omitted to notice his arrival.

proceed in search of the Indians, and returned to his miserable home. Miserable indeed it was; two of the three left behind were unable to quit their beds, and they scarcely ceased from shedding tears the whole day. "I was too weak to pound the bones, and Peltier (the third) agreed to do that in addition to his more fatiguing task of getting wood. We perceived our strength to decline every day, and every exertion began to be irksome; when once seated, the greatest effort was necessary in order to rise, and we had frequently to lift each other from our seats."

Eighteen days were passed in this miserable condition, which had increased from day to day, with the prospect, however, of a speedy termination, for the weather had set in so severely that the *tripe de roche* was entirely frozen, the thermometer being from 15° to 20° below zero. Just then, Franklin says,

"While we were seated round the fire this evening, discoursing about the anticipated relief, the conversation was suddenly interrupted by Peltier's exclaiming, with joy, 'Ah! le monde!' imagining that he heard the Indians in the other room; immediately afterward Dr. Richardson and Hepburn entered, each carrying his bundle. When I saw them alone, my own mind was instantly filled with apprehensions respecting my friend Hood and our other companions, which were immediately confirmed by the doctor's melancholy communication that Mr. Hood and Michel were dead. Perrault and Fontano had neither reached the tent nor been heard of by them. This intelligence produced a melancholy despondency in the minds of my party, and on that account the particulars were deferred until another opportunity."—P. 446.

The emaciated countenances of the doctor and Hepburn gave evidence of their debilitated state. "The doctor particularly remarked the sepulchral tones of our voices, which he requested of us to make more cheerful, if possible, unconscious that his own partook of the same key." A partridge which Hepburn had shot was held to the fire, and then divided into six portions. "I and my three companions," says Franklin, "ravenously devoured our shares, as it was the first morsel of flesh any of us had tasted for *thirty-one days*, unless, indeed, the small, gristly particles which we found occasionally

adhering to the pounded bones may be termed flesh." Piety and resignation under calamity are characteristics of the naval profession; and on the present occasion of distress we are told, "the doctor having brought with him his Prayer-book and Testament, some prayers and psalms, and portions of Scripture appropriate to our situation, were read, and we retired to bed." Franklin says:

"After our usual supper of singed skin and bone soup, Dr. Richardson acquainted me with the afflicting circumstances attending the death of Mr. Hood and Michel, and detailed the occurrences subsequent to my departure from them, which I shall give from his own journal, in his own words; but I must here be permitted to express the heartfelt sorrow with which I was overwhelmed at the loss of so many companions; especially of my friend Mr. Hood, to whose zealous and able co-operation I had been indebted for so much invaluable assistance during the expedition, while the excellent qualities of his heart engaged my warmest regard. His scientific observations, together with his maps and drawings (a small part of which only appear in this work), evince a variety of talent, which, had his life been spared, must have rendered him a distinguished ornament to his profession, and which will cause his death to be felt as a loss to the service."—P. 448.

The melancholy tale of disasters that had befallen the party Franklin left behind is most heart-rending, and is feelingly given in the narrative of Dr. Richardson, which is thus introduced:

"Through the extreme kindness and forethought of a lady, the party, previous to leaving London, had been furnished with a small collection of religious books, of which we still retained two or three of the most portable, and they proved of incalculable benefit to us. We read portions of them to each other as we lay in bed, in addition to the morning and evening service, and found that they inspired us on each perusal with so strong a sense of the omnipresence of a beneficent God, that our situation, even in these wilds, appeared no longer destitute; and we conversed, not only with calmness, but with cheerfulness, detailing with unrestrained confidence the past events of our lives, and dwelling with hope on our future prospects. Had my poor friend been spared to revisit his native land, I should look back to this period with unalloyed delight."—P. 449.

The same kind of distress and suffering which afflict-

ed the party at Fort Enterprise, were deeply aggravated by want of fire, of wood, and of ability to provide sustenance, by the coldness of the weather, and by the extreme debility of poor Hood. On the first two days they had nothing to eat except an infusion of the country tea-plant, which was gratifying from its warmth, but afforded no sustenance; the second day was so stormy, and the snow fell so heavy, that they kept their beds, if a few miserable skins and their clothing deserved the name. On the third day, Michel, the Iroquois, brought them a hare and partridge: "This unexpected supply," says Richardson, "was received by us with a deep sense of gratitude to the Almighty, and we looked upon Michel as the instrument he had chosen to preserve all our lives." He complained of cold, and Mr. Hood offered to share his buffalo robe with him at night; the doctor gave him a shirt, and Hepburn, in the warmth of his heart, exclaimed, "How I shall love this man, if I find he does not tell lies, like the others!" Hepburn had studied the man, and found cause to suspect him. The party this day, after reading the evening service, retired to bed full of hope. Nothing, it may be observed, like despondency, not even a murmur, ever escaped from their lips.

With great fatigue, Richardson and Hepburn, with Hood, removed to a wood of pines, to enable them to keep up a fire. The Iroquois was absent. He had, indeed, refused for some days to do any thing, became sulky, and still continued so powerful, that it was strongly suspected he had a hidden supply of meat for his own use. Seeing the enduring obstinacy and refractory spirit of this man, and his positive refusal even to collect *tripe de roche*, now their sole dependence, or to get firewood, the doctor told him, that if no relief came from Fort Enterprise before the 20th, Hepburn and he should be dispatched thither with a compass to enable them to find the house.

But at last a grave suspicion arose against this man. On the evening of his arrival at the pines, he pretended he had been in chase of some deer, but could not come up with them; yet he found a wolf, which had been killed by the stroke of a deer's horn, and he had brought them a part of it.

"We implicitly believed this story then, but afterward became convinced, from circumstances, the detail of which may be spared, that it must have been a portion of the body of Belanger or Perrault. A question of moment here presents itself, namely, whether he actually murdered these men, or either of them, or whether he found the bodies in the snow. Franklin, who is the best able to judge of the matter, from knowing their situation in the snow at parting, was strongly of opinion that both Belanger and Perrault had been sacrificed; that Michel, having already destroyed Belanger, completed his crime by Perrault's death in order to screen himself from detection. With this idea upon our minds, and none to assist us, Hepburn and myself, in gathering as much *tripe de roche* as sufficed to prolong a miserable existence, and poor Hood getting weaker every day, and evidently sinking fast, our situation can better be conceived than expressed.

"At this period we avoided as much as possible conversing upon the hopelessness of our situation, and generally endeavored to lead the conversation toward our future prospects in life. The fact is, that, with the decay of our strength, our minds decayed, and we were no longer able to bear the contemplation of the horrors that surrounded us. Each of us, if I may be allowed to judge from my own case, excused himself from so doing by a desire of not shocking the feelings of the others, for we were sensible of one another's weakness of intellect, though blind to our own. Yet we were calm and resigned to our fate; not a murmur escaped us, and we were punctual and fervent in our addresses to the Supreme Being."—P. 454.

The whole conduct of this man Michel, by Dr. Richardson's account, evinced a diabolical state of mind. He went out alone, refusing to let any one go with him; remained out the whole day, refusing to sleep in the tent; returned contradictory and evasive answers to any questions put to him; regretted he had quitted Franklin's party, and refused to cut wood; spoke in a very surly manner, and threatened to leave the party.

On the morning of the 20th Dr. Richardson says he left Mr. Hood sitting by the fire and arguing with Michel. "Soon after going out," says Richardson, "to gather some rock-tripe, I heard the report of a gun; and about ten minutes afterward Hepburn called to me in a voice of great alarm to come directly. When I arrived, I found poor Hood lying lifeless at the fireside, a ball hav-

ing apparently entered his forehead. I was at first horror-struck with the idea that, in a fit of despondency, he had hurried himself into the presence of his Almighty Judge by an act of his own hand; but the conduct of Michel soon gave rise to other thoughts, and excited suspicions which were confirmed when, upon examining the body, I discovered that the shot had entered the back part of the head, and passed out at the forehead, and that the muzzle of the gun had been applied so close as to set fire to the night-cap behind. The gun, from its length, could not have been placed in a position to inflict such a wound except by a second person. On questioning the Iroquois, he said Mr. Hood had sent him into the tent for the short gun, and in his absence the long gun had gone off, he did not know whether by accident or not. Hepburn said that, on hearing the report, he saw Michel rising up before the tent door, or just behind where Mr. Hood was seated, and then go into the tent. Every circumstance before and after this event indicated the assassin." For the three following days he kept constantly on his guard, and carefully avoided leaving the doctor and Hepburn together. He even made use of threatening language; and whenever Hepburn spoke, he asked him if he accused him of the murder. He said he hated the white people, two of whom had killed and eaten his uncle and two of his relations.

Taking the whole conduct of this man into consideration, no other conclusion could be drawn than that he would attempt to destroy Richardson and Hepburn the first opportunity that offered. The two were in no condition to resist even an open attack, nor could they, by any device, escape from him; his strength was powerful, and, besides his gun, he was armed with two pistols, an Indian bayonet, and a knife. In the afternoon he went to a rock under pretence of collecting *tripe de roche*, and said he would soon be with us, this being the first time since Mr. Hood's death that he had left the two officers together. Hepburn was not easily to be imposed upon. He gave such an account of the man, that Dr. Richardson was satisfied there could be no safety for them except in his death, and Hepburn proposed to be the instrument of it.

"I determined, however (says Richardson), as I was thoroughly convinced of the necessity of such a dreadful act, to take the whole responsibility upon myself; and immediately upon Michel's coming up, I put an end to his life by shooting him through the head with a pistol. Had my own life alone been threatened, I would not have purchased it by such a measure; but I considered myself as intrusted also with the protection of Hepburn, a man who, by his humane attention and devotedness, had so endeared himself to me, that I felt more anxiety for his safety than for my own. Michel had gathered no *tripe de roche*, and it was evident to us that he had halted for the purpose of putting his gun in order, with the intention of attacking us, perhaps, while we were in the act of encamping."—P. 458.

The loss of poor Hood was a severe blow, and Richardson and Hepburn had the last mournful office to perform over his remains by interring the body in a clump of willows, and reading the funeral service in addition to the evening prayers.

"The loss of a young officer of such distinguished and varied talents and application may be felt and duly appreciated by the eminent characters under whose command he had served; but the calmness with which he contemplated the probable termination of a life of uncommon promise, and the patience and fortitude with which he sustained, I may venture to say, unparalleled bodily sufferings, can only be known to the companions of his distresses. *Bickersteth's Scripture Help* was lying open beside the body, as if it had fallen from his hand, and it is probable that he was reading it at the instant of his death."—P. 456, 457.

Dr. Richardson says that in the preceding part of the narrative he has dwelt upon many circumstances of Michel's conduct, "not for the purpose of aggravating his crime, but to put the reader in possession of the reasons that influenced me in depriving a fellow-creature of life."

Six days had the two remaining desolate and unhappy travelers to drag themselves through deep snow, without food, and almost without any fire, existing on lichens and scrapings of the skin cloak of poor Mr. Hood. On the fifth day Dr. Richardson fell down among large stones under the snow more than twenty times, and says, at length he became so exhausted as to be unable to stand. "If Hepburn had not exerted himself beyond

his strength, and speedily made the encampment and kindled a fire, I must have perished on the spot."

On the sixth day (the 29th of October) they were approaching Fort Enterprise, and as they came in sight of it at dark, Dr. Richardson, in concluding his mournful narrative, says:

"It is impossible to describe our sensations when, on attaining the eminence that overlooks it, we beheld the smoke issuing from one of the chimneys. From not having met with any footsteps in the snow as we drew nigh our once cheerful residence, we had been agitated by many melancholy forebodings. Upon entering the now desolate building, we had the satisfaction of embracing Captain Franklin; but no words can convey an idea of the filth and wretchedness that met our eyes on looking around. Our own misery had stolen upon us by degrees, and we were accustomed to the contemplation of each other's emaciated figures; but the ghastly countenances, dilated eyeballs, and sepulchral voices of Mr. Franklin and those with him, were more than we could at first bear."—P. 461.

The melancholy situation of poor Franklin was still augmented, if possible, by the helpless and exhausted state of two of his most faithful Canadians, Peltier and Samandré, who died two days after the arrival of Richardson and Hepburn, when, had they not fortunately come, Franklin would have been left with one solitary companion, sick and helpless as himself, and both so utterly unable to assist themselves, that eight-and-forty hours, nay, half that time, would probably have put an end to their misery. The whole labor, therefore, of procuring firewood, of scraping together old pieces of skins and fragments of bone, devolved on Richardson and Hepburn, whose strength had rapidly been declining, and was nearly exhausted; when, providentially, on the 7th of November, the long-expected relief arrived by three Indians, forwarded by Back. Captain Franklin, at this time, thus describes their condition:

"I may here remark, that, owing to our loss of flesh, the hardness of the floor, from which we were only protected by a blanket, produced soreness over the body, and especially those parts on which the weight rested in lying; yet to turn ourselves for relief was a matter of toil and difficulty. However, during this period, and, indeed, all along after the acute pains of hunger, which lasted but three or four days, had

subsided, we generally enjoyed the comfort of a few hours sleep. The dreams which for the most part, but not always, accompanied them, were usually (though not invariably) of a pleasant character, being very often about the enjoyments of feasting. In the daytime we fell into the practice of conversing on common and light subjects, although we sometimes discussed with seriousness and earnestness topics connected with religion. We generally avoided speaking directly of our present sufferings, or even of the prospect of relief. I observed that, in proportion as our strength decayed, our minds exhibited symptoms of weakness, evinced by a kind of unreasonable pettishness with each other. Each of us thought the other weaker in intellect than himself, and more in need of advice and assistance. So trifling a circumstance as a change of place, recommended by one as being warmer and more comfortable, and refused by the other from a dread of motion, frequently called forth fretful expressions, which were no sooner uttered than atoned for, to be repeated, perhaps, in the course of a few minutes. The same thing often occurred when we endeavored to assist each other in carrying wood to the fire; none of us were willing to receive assistance, although the task was disproportioned to our strength. On one of these occasions, Hepburn was so convinced of this waywardness, that he exclaimed, 'Dear me! if we are spared to return to England, I wonder if we shall recover our understandings!'"—P. 465, 466.

The supplies sent by Back set all to rights, but not without the greatest caution against repletion. On the 12th, a note from Back, informing them of his intention to proceed to Fort Providence, prepared them all, without delay, to hasten thither; but Dr. Richardson could get no farther than about three miles, he being by much the weakest of the party. Franklin says (to the honor of the Indians), it was they "who prepared our encampment, cooked for us, and fed us as if we had been children, evincing humanity that would have done honor to the most civilized people."

Mr. Back's narrative is but a continuation of the same kind of sufferings by famine and cold which pursued his footsteps. For days he and his party had nothing to eat; even *tripe de roche* was rarely obtained; many days were passed in sorrow and in suffering ere he had the good fortune to fall in with an Indian encampment. In the course of his search one of his companions was found dead; "I found him," reported St. Germain,

"stretched upon his back on a sand-bank, frozen to death, his limbs all extended and swelled enormously, and as hard as the ice that was near him." "We had the happiness," says Franklin, "of joining our friend Mr. Back at Moose-deer Island. Our feelings on this occasion can well be imagined; and we were deeply impressed with gratitude to him for his exertions in sending the supply of food to Fort Enterprise, to which, under Divine Providence, we felt the preservation of our lives to be owing. He gave us an affecting detail of the proceedings of his party since our separation."

It remains only to state, that the whole party who had survived the long endurement of privation and fatigue arrived in safety at Fort Chipewyan. Here they arranged all their accounts to the satisfaction of those who had been under their employ, Indians as well as Canadians, and here Captain Franklin concludes his painfully interesting narrative:

"We were here furnished with a canoe by Mr. Smith, and a bowman to act as our guide; and having left Fort Chipewyan on the 5th of June, we arrived on the 4th of July at Norway House. Finding at this place that canoes were about to go down to Montreal, I discharged all our Canadian voyagers, and sent them by these vessels, furnishing them with orders on the agent of the Hudson's Bay Company for the amount of their wages. We carried Augustus down to York Factory, where we arrived on the 14th of July, and were received with every mark of attention and kindness by Mr. Simpson, the governor, Mr. M'Tavish, and, indeed, by all the officers of the united companies. And thus terminated our long, fatiguing, and disastrous travels in North America, having journeyed by water and by land (including our navigation of the Polar Sea) five thousand five hundred and fifty miles."—P. 493, 494.

It is impossible to rise from the perusal, even of this abridged narrative, without feeling the deepest contrition, mingled with admiration, of such dignified conduct. It contains but a small portion of the transactions and adventures of these few brave spirits, who have so eminently distinguished themselves by a determined perseverance under difficulties of no ordinary kind; by their magnanimity in bearing up under suffering and distress in every aggravated shape—extreme cold, fatigue, hun-

ger in its most appalling character, want of fuel, want of clothing, want of covering from the inclemency of the weather, dragging their wearied bodies for a protracted period over a barren country buried in deep snow, and bearing all their miseries without a murmur, and, above all, with a devout resignation to the Divine will, and a confident hope, in the very last extremity, of the goodness and mercy of their heavenly Father, which, in His own good time, they were fully confident would be extended to them.

Such conduct, under such sufferings, supported by such feelings, must ever cause the names and memory of Sir John Franklin, Sir George Back, Mr. Hood, and Dr. Richardson to be held in high regard and estimation, in which we may be well assured every one connected with the naval service will cordially participate : nor will the unshaken fidelity and philanthropy of John Hepburn be less entitled to admiration and gratitude.*

* It was gratifying to find that these brave men were not forgotten at headquarters in their absence, Franklin being raised to the rank of captain, and Mr. Back and Mr. Hood each to that of lieutenant, and honest John Hepburn placed in a comfortable situation in one of the dockyards.

CHAPTER XI.

FRANKLIN AND RICHARDSON.

1825, 1826, 1827.

Narrative of a Second Expedition to the Shores of the Polar Sea. By JOHN FRANKLIN, Capt. R. N., Commander of the Expedition.

THE mental and physical constitution of a thoroughbred English seaman is rarely found to give way to, or succumb under, misfortunes. He may suffer repeated shipwrecks, may be wounded in fight with the enemy, captured and thrown into prison, all or any of which will not deter him from, but rather increase his anxiety for, following up his profession, under the hope of more favorable auspices. Thus, in the true spirit of a seaman, Captain Franklin, in spite of the almost unheard-of sufferings he endured for a long time, both mental and physical, brought on by extreme cold, debility, and famine, even to death's door—with the full recollection of all these, could not resist the temptation of offering a plan, and also *himself* for the execution of it, to the government, of a second expedition of the same kind, for the same purpose, and over the same country, as the one from which he had just returned, and on which the extent of his sufferings had all but put an end to his existence.

"I was well aware," says this noble-minded officer, "of the sympathy excited in the British public by the sufferings of those engaged in the former overland expedition to the mouth of the Copper Mine River, and of the humane repugnance of his majesty's government to expose others to a like fate; but I was enabled to show satisfactorily that in the proposed course similar dangers were not to be apprehended, while the objects to be attained were at once important to the naval character, scientific reputation, and commercial interests of Great Britain; and I received directions from the Right Honorable Earl Bathurst to make the necessary preparations for the equipment of the expedition, to the command of which I had the honor to be nominated."—*Introd.*, ix., x.

Many naval officers of distinguished talents anxiously offered their services, but his companions in misfortune, *Lieutenant Back* and *Dr. Richardson*, being among the foremost to volunteer, were the first to be considered; the former already distinguished for his zeal and energy in all the contingencies of an exploring voyage, and the latter as surgeon and naturalist, it may be said of the first distinction, as he had proved himself to be, and, moreover, a gentleman of the most benevolent and humane disposition. The valuable services of these two officers on the former expedition can never be overlooked. To their energy of character and promptitude of action may undoubtedly, as Franklin records, be ascribed the safety of himself and the remaining party. Richardson, not to forsake his former companion and fellow-sufferer, left a comfortable situation at home with a wife and family, so eager was he to complete the geography and the natural history of the American coast which borders the Polar Sea on its southern side. *Lieutenant Bushnan*, who had served with Ross and Parry in their Arctic voyages, and had distinguished himself as a draughtsman and surveyor, was selected as one of the expedition; but the premature death of this excellent young officer, distinguished by his skill in nautical astronomy, surveying, and drawing, was deeply lamented by Franklin; and *Mr. E. N. Kendall*, Admiralty mate, and recently assistant surveyor with Captain Lyon, was also appointed to the same situation in the present expedition; lastly, *Mr. Thomas Drummond*, of Forfar, was appointed assistant naturalist on the recommendaion of Professor Hooker and other eminent scientific men.

In acceding to Captain Franklin's proposal, the government was not unmindful of having sent out Captain Parry on his third expedition in the preceding year, and that he might require information and assistance in the event of his proceeding along the American coast of the Polar Sea; that portion of it interjacent between Mackenzie River and Icy Cape being wholly unknown, as was also that between Mackenzie and Hearne's Rivers. The main object of the present expedition was therefore to explore these two portions of that coast, and was so explained in the official instructions.

In the preparations for this arduous undertaking, Captain Franklin's experience had taught him that birch-bark canoes were not the vessels calculated for rough and icy seas, and therefore three boats of a particular size and construction were ordered by the Admiralty to be made; and when finished, and tried at Woolwich as to their qualities of sailing, rowing, and paddling, they were found to answer fully the expectations that had been formed of them. A third little boat, nine feet by four and a half, and covered with Mackintosh's prepared canvas, was made, and called the Walnut Shell. The fatal stoppage at the crossing of Copper Mine River had suggested this; and we are told that, on the trial, several ladies fearlessly embarked in it, and were paddled across the Thames in a fresh breeze.

In the preparations nothing appears to have been omitted. Scientific instruments of all kinds, fowling-pieces and ammunition, marquees and tents, bedding, clothing, and water-proof dresses, flour, arrow-root, maccaroni, portable soup, chocolate, essence of coffee, sugar and tea, not omitting an adequate supply of that essential article for all North American travelers, *pemmican*. In short, whatever of use or luxury could be suggested, was provided, to obviate, as Franklin said, "any apprehension of similar dangers to those experienced on the former expedition."

When all was completed, on the 16th of February, 1825, Captain Franklin, Lieutenant Back, Dr. Richardson, Mr. Kendall, Mr. Drummond, with four marines, embarked at Liverpool on board the American packet Columbia for New York. It would be thought a waste of the reader's time to wade through a detail of their reception in America, and of their progress along the rivers, over the lakes and portages, with the numerous obstructions and difficulties they encountered, but rather to proceed at once to land them in safety at Fort Chipewyan on the 15th of July, 1825. Their early arrival, it seems, caused great surprise to its inmates, being only two days later than the time when Richardson and Hood had arrived in 1819, though they came only from Cumberland House, where they had wintered.

It will be sufficient to say that the whole party as-

sembled on the banks of the Great Bear Lake River, which flows out of that lake on the western side into the Mackenzie River, down which they were to descend to the sea. On their arrival at its mouth, the explorers were to divide themselves, agreeably with their official instructions, into two parties; the one, under Captain Franklin, to proceed westerly, along the northern coast of America as far as Icy Cape, or to the entrance of Behring's Strait, where he was told he might expect to find H. M. ship Blossom, under the orders of Captain Beechey. The other party, under Dr. Richardson, was to depart at the same time from the mouth of the same river, and proceeding easterly along the same coast, continue till he reached the mouth of the Copper Mine River. Previous, however, to the commencement of these expeditions along the coast, Franklin made the following arrangements: first, that he should go down to the sea, taking Mr. Kendall with him to collect information respecting the general state of the ice in autumn and summer; the direction of the coast, and whether they might calculate on a supply of provisions. *Secondly*, that Dr. Richardson should, in his absence, proceed in a boat to that part of Bear Lake which approached nearest to the Copper Mine River, and there fix a spot to which he might return the following year from the mouth of that river. And *thirdly*, that Lieutenant Back, with the assistance of Mr. Dease, chief trader of the Hudson's Bay Company, should provide a comfortable residence and subsistence on the shore of Bear Lake for their winter quarters, and also to arrange the distribution of the Indian hunters.

These matters being settled, Franklin and Kendall embarked on the 8th of August in the largest boat, the Lion, with a well-selected crew of six Englishmen, and Augustus, the Esquimaux interpreter. Lieutenant Back had the charge of three canoes, each manned with five men. The crews of these, imagining they could easily pass the English boat, were not a little surprised and mortified, on putting it to the proof, to find the boat taking and maintaining the lead, both under sail and with oars. This river has been so well described by Mackenzie, that a very few observations will be sufficient

They found, what this traveler mentions, a quantity of wood-coal, which was now perceived to be on fire, and its smell very disagreeable. When tried at winter quarters, it was found to emit little heat, and unfit for the blacksmith's use. The banks contain also a kind of unctuous mud, which the Indians use occasionally as food during the seasons of famine, and even at other times chew as an amusement. It is said to have a milky taste, and that the flavor is not disagreeable. Franklin also mentions a dark bituminous liquid oozing from the rocks, and two streams of sulphureous water flowing into the Mackenzie, where the Bear Lake River joins it; also, lower down, the eastern bank is composed of thin strata of bituminous shale.

Near a place called the "Ramparts" is a defile of seven miles, where the river rushes with great violence between perpendicular walls of limestone. Here they fell in with a party of Hare Indians, all neatly clothed in new leathern dresses, highly ornamented with beads and porcupine quills, both sexes alike, who brought fish, berries, and meat. At Fort Good Hope, the lowest of the Company's establishments, and upward of three hundred miles from where the party had embarked, Mr. Charles Dease received and prepared for them a meal at midnight. The fort is situated in the midst of the tribe of Indians which Mackenzie calls Quarrelers, but whom the traders name Loucheux or Squinters. Here a young man, a half-breed, named Baptiste, the interpreter of the fort, was lent to them for the purpose of introducing the party to the Loucheux chief. Lower down, a party of these people stood gazing at the strangers with much distrust, and refused to accept their invitations, till at length a youth, gayly dressed, paddled off in his boat, and discovering Augustus, whom he recognized as an Esquimaux, rose up in his canoe, threw up his hands for joy, and desired every one to come off at once. "They caressed Augustus, danced and played around him, to testify their joy at his appearance among them; and we could not help admiring the demeanor of our excellent little companion under such unusual and extravagant marks of attention."

The river was now divided by islands into several

channels. This was the sixth day after their departure; and here they passed the last of the fir-trees, in latitude 68° 40′, these being succeeded by stunted willows, which became more dwarfish as they approached the sea. After the dissipation of a thick fog, the expanse of water to the northward was so great, that Franklin was inclined to think they had reached the sea; and in this he was almost confirmed on reaching the shore of Ellice Island, where they "were rejoiced at the sea-like appearance to the northward." "This point was observed to be in lat. 69° 14′, long. 135° 57′, and forms the northeastern entrance of the main channel of the Mackenzie River, which from Slave Lake to this point is one thousand and forty-five miles, according to our survey." On reaching Whale Island, he was satisfied that, like Mackenzie, he had reached the sea; but, on tasting the water, found it to be perfectly fresh; still he was persuaded he had reached the sea, and observing an island to the northward looking blue by its distance, the boat was directed toward it. About midway they were caught by a strong contrary wind, against which the crew contended for five hours, the waves breaking into the boat; the sails were set, which, with a change in the wind, enabled them in the course of another hour to fetch into smoother water, under the lee of the island. "We then pulled across a line of strong ripple which marked the termination of the fresh water, that on the seaward side being brackish, and in the farther progress of three miles to the island we had the indescribable pleasure of finding the water decidedly salt." This is perhaps noticed in allusion to Mackenzie having been blamed for not ascertaining that the water was salt by tasting it. Franklin says, that with his little frail craft he could not have ventured beyond Whale Island, or three miles, to prove its saltness; but the boundless horizon, the tide, and the sight of porpoises and whales, were enough to induce him to say that he had arrived at the ocean. Franklin says they had often occasion to admire the general correctness of Mackenzie's survey. "In justice to his memory, I hope the custom of calling this the Great River, which is in general use among the traders, will be discontinued, and that the name of its eminent discoverer may be universally adopted."

On Garry Island were found several layers of wood-coal and bituminous liquor. Franklin had put a piece of the former in his pocket, which had ignited spontaneously, and scorched the metal powder-horn by its side. From the summit of this island "the sea appeared in all its majesty, entirely free from ice, and without any visible obstruction to its navigation, and never was a prospect more gratifying than that which lay open to us." But on landing, an incident occurred, the occasion of which, on leaving England, had created in his mind a severe struggle between the feelings of affection and a sense of duty, and those feelings were powerfully awakened on the present occasion. Just as he was about to leave England, his beloved wife, then lying at the point of death, with heroic fortitude urged his departure at the very day appointed, entreating him, as he valued her peace of mind and his own glory, not to delay a moment on her account; that she was fully aware that her days were numbered, and that his delay, even if she wished it, could only be to close her eyes. She died the day after he left her. It was to this circumstance that allusion is made in the following passage, "which," it was well observed by a friend of his, "will speak to the heart of every one who is capable of understanding the grace that domestic tenderness lends to the gallant fortitude of public enterprise."

"During our absence the men had pitched the tent on the beach, and I caused the silk union-flag to be hoisted, which my deeply-lamented wife had made and presented to me, as a parting gift, under the express injunction that it was not to be unfurled before the expedition reached the sea. I will not attempt to describe my emotions as it expanded to the breeze; however natural, and, for the moment, irresistible, I felt that it was my duty to suppress them, and that I had no right, by an indulgence of my own sorrows, to cloud the animated countenances of my companions. Joining, therefore, with the best grace that I could command, in the general excitement, I endeavored to return, with corresponding cheerfulness, their warm congratulations on having thus planted the British flag on this remote island of the Polar Sea."—P. 36.

Circumstanced as he was with a party many of whom had never seen the sea, and others in constant apprehension of being attacked by the Esquimaux (an appre-

hension that was realized on the second visit to the spot), it was expedient, however painfully distressing, to join in the general excitement, and not to suffer it to flag by any appearance of sorrow or despondency. In doing so, he says:

"Some spirits, which had been saved for the occasion, were issued to the men; and with three fervent cheers they drank to the health of our beloved monarch, and to the continued success of our enterprise. Mr. Kendall and I had also reserved a little of our brandy, in order to celebrate this interesting event; but Baptiste, in his delight of beholding the sea, had set before us some salt water, which having been mixed with the brandy before the mistake was discovered, we were reluctantly obliged to forego the intended draught, and to use it in the more classical form of a libation poured on the ground."—P. 36, 37.

Captain Franklin was now desirous of proceeding westward, to make some farther examination in aid of the future operations of the expedition, and of reaching, if possible, the foot of the Rocky Mountains; but a gale of wind, violent squalls, and a threatening appearance, induced him to give up the attempt and to regain the river, in order to make the best of their way back to the fort, which they reached on the 5th of September, where Dr. Richardson and all the other members of the expedition were assembled. The buildings for their winter quarters were in a state of great forwardness. The dwelling of the officers measured 44 feet by 24, and contained a hall and four apartments, besides a kitchen; that of the men was 36 by 23 feet, and divided into three rooms. To this comfortable residence for eight or nine months, "the officers," says Franklin, "had done me the honor, previous to my arrival, of giving the name of *Franklin*, which I felt a grateful pleasure in retaining at their desire, though I had intended to name it Fort Reliance."

To pass the winter in a much higher degree of latitude, as Parry did on board ship, was thought nothing of; it required only employment for officers and men, in order to shorten the time of confinement. Franklin was well aware of, and seems to have taken a lesson from, the regulations of Parry. The Canadians and the Indians had plenty of employment for the first four or five

months, in hunting and fishing for the support of the whole party. The reindeer were scarce in the autumn, and in the winter deserted them altogether. The fishing was more successful, and during the autumn the nets yielded daily from three to eight hundred fish, of the kind called "herring salmon;" also some trout, tittameg, and carp.

The officers employed themselves in making and registering the various meteorological observations, in copying their journals and remarks, in finishing the charts, drawings, and sketches, and in assisting Dr. Richardson to examine and arrange the numerous objects of natural history that had been collected. But it was equally necessary to find employment for the seamen and the various residents of the house, whose want of education rendered it more difficult to provide for. The plan adopted by Franklin is thus described:

"As the days shortened, it was necessary to find employment, during the long evenings, for those resident at the house, and a school was therefore established on three nights of the week, from seven o'clock to nine, for their instruction in reading, writing, and arithmetic, which was attended by most of the British party. They were divided in equal portions among the officers, whose labor was amply repaid by the advancement their pupils made: some of those who began with the alphabet learned to read and write with tolerable correctness. Sunday was a day of rest; and, with the exception of two or three of the Canadians, the whole party uniformly attended Divine service morning and evening. If, on the other evenings for which no particular occupation was appointed, the men felt the time tedious, or if they expressed a wish to vary their employments, the hall was at their service, to play any game they might choose; and on these occasions they were invariably joined by the officers. By thus participating in their amusements, the men became more attached to us, at the same time that we contributed to their health and cheerfulness. The hearts and feelings of the whole party were united in one common desire to make the time pass as agreeably as possible to each other, until the return of spring should enable them to resume the great object of the expedition."—P. 54, 55.

Matters went on pretty well till the conclusion of the year; but, owing to the extreme severity of the weather in January and February, the sources from which

they had hitherto derived subsistence failed them. The thermometer fell to —49° on the 1st of January, being the lowest point to which it descended; but this severe weather was of short duration, for on the 3d a snow-storm carried it up to —9° : the highest from the 1st to the 10th was 8° 8′, and the mean —29° 7′. All the animals had migrated to the southward except the wolf and the fox. All the dried meat was expended, and no fresh flesh could be procured; the fish caught did not allow more than three or four small herrings to each man, which, being out of season, afforded little nourishment, and caused indisposition. They were therefore obliged to have recourse to their provision of pemmican, arrow-root, and portable soup, which had been set apart for the voyages along the sea-coast.

By the middle of April a large supply of meat was brought up from the stores of the Hudson's Bay Company, which put them quite at ease respecting food until the season for their departure; besides, the animals were beginning to pour in from the southward. Of these and other "phenomena connected with the progress of the seasons kept at Fort Franklin,"* Dr. Richardson records, that on the 11th of September the musquetoes ceased to be troublesome; on the 2d of October, swans in flight to the southward; on the 5th the last swans were seen. On the shortest day the sun was above the horizon 2h. 38m. 10th of April, a house-fly seen in the open air. On the 6th of May the first swans were seen; on the 7th the geese appeared; on the 8th the ducks; on the 9th the gulls; on the 11th the first rain fell; on the 17th various singing birds made their appearance; on the 27th the first laughing-geese were seen; and on the 31st the goatsuckers brought up the rear: and many others, as well as various plants, are registered.

In the course of the month of May the preparations were nearly complete, and an additional new boat finished, after the model of the Lion, named the Reliance. In June the boats were all afloat and manned. Fourteen men, including Augustus and two Canadian voyagers, were to accompany Franklin and Back in the Lion and Reliance; and ten, including Ooligbuck (another Esqui-

* Appendix, p. 74, table 75.

maux), to go with Richardson and Kendall in the Dolphin and Union.

The position of Fort Franklin was determined; its latitude 55° 11′ 56″, longitude 123° 12′ 44″ W., variation 39° 9′ E., dip 82° 58′ 15″.

The whole party embarked on Bear Lake River on the 24th of June, the 23d being a sultry day; the thermometer in the shade at noon 71°, and at 3 P.M. 74°: the ice drifting down in large masses, and with such rapidity as to render embarcation unsafe. It ceased, however, at eight the following morning, and allowed them to proceed: in the evening they entered the Mackenzie River. On leaving Fort Good Hope on the 2d of July, being on the border of the Esquimaux territory, it was deemed expedient to arm the men, and a gun, dagger, and ammunition were issued to each person. On the 3d they reached the broad part of the river, where different channels branch off; and here the separation of the parties was to take place. The western branch was the route to be pursued by the boats of Franklin's party, and the eastern branch by those of Richardson; the former to proceed along the northern coast westerly as far as Icy Cape, where it was expected to fall in with the Blossom; the latter to examine the coast-line between the mouth of the Mackenzie and that of the Copper Mine River, and having reached the latter, he was directed to proceed by land to the northeast arm of the Great Bear Lake, where a boat would meet and convey him to Fort Franklin. The Lion, under the command of Captain Franklin, had a crew of six men, with Augustus the interpreter. The Reliance, under the orders of Lieutenant Back, was manned with seven men, consisting of four seamen, a marine, and two Canadian voyagers.

Franklin's Voyage to the Westward.

To follow Franklin first, on his voyage to the westward, after passing through several shallow channels between islands and the main, trending westerly. On the 7th of July the party reached the mouth of the river, and Franklin, walking toward the shore, discovered on an island a crowd of tents, with many Esquimaux strolling among them. He therefore hastened back to the

boat to prepare for a communication with them, and to select certain articles for presents and trade. He gave orders, in case these people should show intentions of hostility, to forbid firing till he should set the example, or till ordered to do so by Lieutenant Back.

The boats steered toward the tents under easy sail, with the ensigns flying; unfortunately, they grounded when about a mile from the beach. Signs were made to the Esquimaux to come off. Three canoes instantly put off, but before they could reach the boats, others were lanched in such quick succession, that the whole space between the island and the boats was covered with them. "We endeavored," says Franklin, "to count their numbers as they approached, and had proceeded as far as seventy-three canoes and five oomiaks, when the sea became so crowded by fresh arrivals that we could advance no farther in our reckoning." It was supposed, however, that the number of persons had soon increased to about three hundred, all pressing forward to trade, and becoming more and more importunate and troublesome. The headmost canoes were paddled by elderly men, who most probably had been selected to open the communication. They invited Augustus to approach with the present held out to them. Augustus then explained to them the purport of our visit, and told them that if we found a navigable channel for large ships, we should come and open a highly beneficial trade with them: with this they were delighted, tossed up their hands aloft, "raising the most deafening shout of applause I ever heard."

Thus far all went on well; but an accident happened while the crowd was pressing round the boats, which was productive of unforeseen and very annoying consequences:

"A kaiyack being overset by one of the Lion's oars, its owner was plunged into the water with his head in the mud, and apparently in danger of being drowned. We instantly extricated him from his unpleasant situation, and took him into the boat until the water could be thrown out of his kaiyack; and Augustus, seeing him shivering with cold, wrapped him up in his own great-coat. At first he was exceedingly angry, but soon became reconciled to his situation; and, looking about, discovered that we had many bales and

other articles in the boat, which had been concealed from the people in the kaiyacks by the coverings being carefully spread over all. He soon began to ask for every thing he saw, and expressed much displeasure on our refusing to comply with his demands; he also, we afterward learned, excited the cupidity of others by his account of the inexhaustible riches in the Lion, and several of the younger men endeavored to get into both our boats, but we resisted all their attempts."—P. 101, 102.

They continued, however, to press, and made many efforts to get into the boats, while the water had ebbed so far that it was not knee-deep at the place where they lay; and the younger men, waiting in crowds around them, tried to steal every thing they could reach. The Reliance being afloat, was dragged by the crowd toward the shore, when Franklin directed the crew of the Lion (which was aground and immovable) to endeavor to follow her; but she remained fast until the Esquimaux lent their aid and dragged her after the Reliance. One of the Lion's men perceived that the man who was upset had a pistol under his shirt, which it was discovered had been stolen from Lieutenant Back, and the thief, seeing it to be noticed, leaped out of the boat and joined his countrymen, carrying with him the great-coat which Augustus had lent him.

"Two of the most powerful men, jumping on board at the same time, seized me by the wrists and forced me to sit between them; and as I shook them loose two or three times, a third Esquimaux took his station in front to catch my arm whenever I attempted to lift my gun, or the broad dagger which hung by my side. The whole way to the shore they kept repeating the word '*teyma*,' beating gently on my left breast with their hands, and pressing mine against their breasts. As we neared the beach, two oomiaks full of women arrived, and the '*teymas*' and vociferation were redoubled. The Reliance was first brought to the shore, and the Lion close to her a few seconds afterward. The three men who held me now leaped ashore, and those who had remained in their canoes, taking them out of the water, carried them to a little distance. A numerous party then drawing their knives, and stripping themselves to the waist, ran to the Reliance, and, having first hauled her as far up as they could, began a regular pillage, handing the articles to the women, who, ranged in a row behind, quickly conveyed them out of sight."—P. 104.

In short, after a furious contest, when knives were brandished in a most threatening manner, several of the men's clothes cut through, and the buttons of others torn from their coats, Lieutenant Back ordered his people to seize and level their muskets, but not to fire till the word was given. This had the desired effect, the whole crowd taking to their heels and hiding themselves behind the drift-timber on the beach. Captain Franklin still thought it best to temporize so long as the boats were lying aground; for, armed as the Esquimaux were with long knives, bows, arrows, and spears, fire-arms could not have been used with advantage against so numerous a host. Franklin, indeed, states his conviction, "considering the state of excitement to which they had worked themselves, that the first blood which his party might unfortunately have shed would instantly have been revenged by the sacrifice of all their lives."

As soon as the boats were afloat and making to a secure anchorage, seven or eight of the natives walked along the beach, entered into conversation with Augustus, and invited him to a conference on shore. "I was unwilling to let him go," says Franklin, "but the brave little fellow entreated so earnestly that I would suffer him to land and reprove the Esquimaux for their conduct, that I at length consented." On his return, being desired to tell what he had said to them, "he had told them," he said,

"Your conduct has been very bad, and unlike that of all other Esquimaux. Some of you even stole from me, your countryman; but that I do not mind; I only regret that you should have treated in this violent manner the white people, who came solely to do you kindness. My tribe were in the same unhappy state in which you now are before the white people came to Churchill, but at present they are supplied with every thing they need, and you see that I am well clothed; I get all that I want, and am very comfortable. You can not expect, after the transactions of this day, that these people will ever bring goods to your country again, unless you show your contrition by restoring the stolen goods. The white people love the Esquimaux, and wish to show them the same kindness that they bestow upon the Indians. Do not deceive yourselves, and suppose they are afraid of you; I tell you they are not; and that it is entirely

owing to their humanity that many of you were not killed to-day; for they have all guns, with which they can destroy you either when near or at a distance. I also have a gun, and can assure you that, if a white man had fallen, I would have been the first to have revenged his death."—P. 108, 109.

The language, of course, is that of Franklin, who, however, gives it as the purport of Augustus's speech, and adds, "his veracity is beyond all question with the party." "We could perceive," says Franklin, "by the shouts of applause with which they filled the pauses in his language, that they assented to his arguments; and he told us they had expressed great sorrow for having given so much cause of offense." He said, moreover, that they pleaded ignorance, having never before seen white men; that they had seen so many fine things entirely new to them, that they could not resist the temptation of stealing; they promised never to do the like again, and gave a proof of their sincerity by restoring the articles that had been stolen; and thus, in an amicable manner, was the affray concluded.

These people, in possession of the country bordering on the coast between the Mackenzie River and the Rocky Mountains, appear to have assumed a more warlike character, from frequent collisions with their neighbors the Dog-rib Indians, than their countrymen generally possess. It was also observed, that the farther the party advanced to the westward, the more they found the Esquimaux features taking the resemblance of those of the Tartar race, distinguished by high cheek-bones, and small, obliquely elongated eyes, not unlike those of the Chinese.

"Every man had pieces of bone or shells thrust through the septum of his nose; and holes were pierced on each side of the under lip, in which were placed circular pieces of ivory, with a large blue bead in the center, similar to those represented in the drawings of the natives on the N.W. coast of America, in Kotzebue's Voyage. These ornaments were so much valued, that they declined selling them; and when not rich enough to procure beads or ivory, stones and pieces of bone were substituted. These perforations are made at the age of puberty; and one of the party, who appeared to be about fourteen years old, was pointed out with delight by his parents as having to undergo the oper-

ation in the following year. He was a good-looking boy, and we could not fancy his countenance would be much improved by the insertion of the bones or stones, which have the effect of depressing the under lip, and keeping the mouth open."—P. 118.

The dress of the women differed from that of the men only in their wearing wide trowsers, and large hoods over their heads; some of the younger females had pleasing countenances.

"Their own black hair is very tastefully turned up from behind to the top of the head, and tied by strings of white and blue beads, or cords of white deer skin. It is divided in front, so as to form on each side a thick tail, to which are appended strings of beads that reach to the waist. The women were from four and a half to four and three quarters feet high, and generally fat. Some of the younger females, and the children, were pretty. The lady whose portrait adorns this work was mightily pleased at being selected by Lieutenant Back for his sketch, and testified her joy by smiles and many jumps. The men, when sitting for their portraits, were more sedate, though not less pleased, than the females; some of them remarked that they were not handsome enough to be taken to our country."—P. 119.

Having taken an amicable leave of these people, on the 13th of July they put to sea, and soon discovered a projecting point of land, to which was joined a compact body of ice. A dense fog set in, with a strong gale and heavy rain. With considerable danger to the boats, after five hours' pulling between masses of ice, they succeeded in getting round Cape Sabine, and landed a little to the west of it. Here they observed much wood-coal on the bank. On the 15th they proceeded, having noticed the ice loosened from the land, and advanced to a river which they named Babbage, the width near its mouth being about two miles. Here it was observed that the Rocky Mountains run in detached ranges, at unequal distances from the coast. Their latitude was 69° 19′, longitude 138° 10½′.

On the 17th, finding a channel of water between an island they named Herschel and the main, they entered it, and this strait is reported to be "the only place that we had seen since quitting the Mackenzie River in which a ship could find shelter." Its latitude was 69° 33½′, longitude 139° 3′ W. The ice and the shallow-

ness of the water beyond it seaward somewhat checked their progress, and gave time for Franklin to visit Mount Conybeare, one of the rocky ranges he had so named, from whence he had an extensive view of the succession of ranges, to all which he assigns names, that probably are not doomed to go beyond the page that contains them, and certainly not to posterity. On the 23d a narrow opening in the ice allowed them to proceed as far as a small stream, which they named Sir Pulteney Malcolm, and which had given them an advance of ten miles. Bowlders of greenstone, sandstone, and limestone were found near the mouth of this river, deeply seated in the gravel of the beach.

On the 27th of July they came to the mouth of a wide river, which, proceeding from the "British range of mountains," "and being," says Franklin, "the most westerly river in the British dominions on this coast, and near the line of demarcation between Great Britain and Russia, I named it the Clarence, in honor of his royal highness the lord-high-admiral." From hence fogs and long-continued gales, rain, and heavy pieces of drift-ice continued to interrupt their progress till the 4th of August, when they fell in with a party of trading and peaceable Esquimaux, from whom they learned that the coast before them was similar to that along which they had been traveling. They were now in lat. 70° 5′, long. 143° 55′. For some time past they had pulled the boats outside, or to seaward of the continued reef of rocks and gravel, about two miles, and a little farther on found the water very shallow and perfectly fresh. To another large river they gave the name of Canning, opposite to which, at three miles from the shore, the water was still fresh. This river was of course running through the Russian dominions.

The farther they advanced westerly the more dense the fogs became; not a day elapsed in which they did not occur; the temperature descended to 35°, and the gales of wind became more constant; at night the water froze; and the middle of August having arrived, the winter might here be said to have set in; the more early, probably, from the vicinity of the Rocky Mountains, and the extensive swampy plains between them and the sea.

The men had suffered much from the hard labor of pulling and dragging the heavy boats, and from cold as well as fatigue. It will readily be believed, from the character of the man, that it was with no ordinary degree of pain that Franklin could bring himself even to think of relinquishing the great object of his ambition, or of disappointing the flattering confidence that had been reposed on his exertions. "But," he says, "I had higher duties to perform than the gratification of my own feelings; and the mature consideration of all the above matters forced me to the conclusion that we had reached that point beyond which perseverance would be rashness, and our best efforts must be fruitless." He therefore, with full approbation of his companions, set out, on the 18th of August, on his return to the Mackenzie, from the extreme point gained, named by him the Return Reef, in lat. 70° 24′ N., long. 149° 37′ W.

About this time, as it afterward appeared, the Blossom's boat, sent by Beechey from Behring's Strait, arrived on the coast, on which Franklin observes:

"Could I have known, or by possibility imagined, that a party from the Blossom had been at the distance of only 160 miles from me, no difficulties, dangers, or discouraging circumstances should have prevailed on me to return; but taking into account the uncertainty of all voyages in a sea obstructed by ice, I had no right to expect that the Blossom had advanced beyond Kotzebue Inlet, or that any party from her had doubled the Icy Cape."—P. 165.

Captain Franklin states the distance traced westerly from the mouth of the Mackenzie River to have been 374 miles, along one of the most dreary, miserable, and uninteresting portions of sea-coast that can perhaps be found in any part of the world; and in all that space, not a harbor exists in which a ship could find shelter.

The return voyage was equally harassing to the one just completed. Near Herschel Island, however, they had a narrow escape from the effects of a violent storm on the ocean:

"As the afternoon wore away, gloomy clouds gathered in the northwest; and at six a violent squall came from that quarter, attended with snow and sleet. The gale increased with rapidity: in less than ten minutes the sea was white with foam, and such waves were raised as I had never before

been exposed to in a boat. The spray and sea broke over us incessantly, and it was with difficulty that we could keep free by bailing. Our little vessels went through the water with great velocity, under a close-reefed sail, hoisted about three feet up the mainmast, and proved themselves to be very buoyant. Their small size, however, and the nature of their construction, necessarily adapted for the navigation of shallow rivers, unfitted them for withstanding the sea then running, and we were in imminent danger of foundering. I therefore resolved on making for the shore, as the only means of saving the party, although I was aware that in so doing I incurred the hazard of staving the boats, there being few places on this part of the coast where there was sufficient beach under the broken cliffs. The wind blowing along the land, we could not venture on exposing the boat's side to the sea by hauling directly in, but, edging away with the wind in that quarter, we most providentially took the ground in a favorable spot. The boats were instantly filled with the surf, but they were unloaded and dragged up without having sustained any material damage. Impressed with a sense of gratitude for the signal deliverance we had experienced on this and other occasions, we assembled in the evening to offer up praise and thanksgiving to the Almighty."—P. 172, 173.

On the 21st of September the party reached Fort Franklin, where they had the happiness of meeting all their friends in safety: the eastern detachment had arrived on the 1st of September, after a most successful voyage. Franklin says that the distance traveled, in the three months of their absence from Fort Franklin, amounted to two thousand and forty-eight statute miles, of which six hundred and ten were through parts not previously discovered.

"I can not close this account of our sea voyage without expressing the deep obligation I feel to Lieutenant Back for his cordial co-operation, and for his zealous and unwearied assiduity during its progress. * * * * My warmest thanks are likewise due to the men of my party, who met every obstacle with an ardent desire to surmount it, and cheerfully exerted themselves to the utmost of their power. Their cool, steady conduct is the more commendable as the sea navigation was entirely novel to the whole except to the seamen Duncan and Spinks, and Hallom, corporal of marines. The Canadian voyagers, Felix and Vivier, first saw the ocean on this occasion."

Dr. Richardson's Voyage to the Eastward.

The narrative of Dr. Richardson is briefly and lucidly told. According to his instructions, he had to trace the coast between the Mackenzie and Copper Mine Rivers, and to return from the latter overland to Fort Franklin. His party consisted of himself, the interpreter Ooligbuck, and four men, in the Dolphin; and Mr. *Kendall* in the Union. On leaving Point Separation, in one of the branches of the Mackenzie, on the 4th of July, he made for Middle Channel, out of which he entered a branch flowing to the eastward, the land being low and marshy, and the summits of the banks loaded with drift-timber. These flats were enlivened by the busy flight and cheerful twittering of the sand-martins, which had scooped out thousands of nests in the banks; "we witnessed with pleasure their activity in thinning the ranks of our most tormenting foes, the musquetoes." At forty-two miles the party came to the commencement of Reindeer Hills on the main-land, clothed with trees to their tops.

On the 5th, having made above forty miles, they encamped; and here a spruce-tree was seen of the unusual circumference of seven feet at four feet from the ground. On the following day, in lat. 69°, the Eastern Channel made a turn round the point of the Reindeer Hills, which here terminated; and here also was a small island, possessing, according to Mackenzie, a "sacred character," being still a burial-place of the Esquimaux: it was called by Richardson the "Sacred Island." Here also the channel terminated, by several islands dividing it into as many branches. On some of them, and on various parts of the coast, the bituminous shale was noticed to be on fire; and in some parts of the cliffs appeared as if they had fallen down, owing to the consumption of the combustible strata, and terminating in a green and sloping bank. The attraction of oxygen by the sulphur causes the combustion, which, as the doctor observes, is made more lively by the presence of bitumen.

They now steered along the main shore, and speedily

fell in with a tribe of Esquimaux, who used threatening language and gestures, when Ooligbuck said they were bad people, "entreated me to embark, took me on his back, and carried me on board." As the conduct of these people was very similar to that which Franklin met with, and not differing materially from those inhabiting the eastern coast of Mellville Peninsula, it will not be necessary to notice the numerous parties of these people met with on this voyage. It may be observed, that on this occasion, by judicious management on the part of Richardson, the necessity of firing upon them was avoided. These poor creatures had no doubt the same excuse as those who attacked Franklin; they had never seen white men, and never probably heard of the only one that their great-grandfathers might have seen. Having got rid of the Esquimaux, suddenly a violent gale arose, that, by setting on the shore, obliged them to take shelter in Refuge Cove, in lat. 69° 29′, which they left the following day; but, from the badness of the weather, and the ice extending on the sea to the northward, they made little progress. At their halting-place on the 13th, the doctor says:

"Myriads of musquetoes, which reposed among the grass, rose in clouds when disturbed, and gave us much annoyance. Many snow-birds were hatching on the point, and we saw swans, Canada geese, eider, king, arctic, and surf ducks; several glaucous, silvery, black-headed, and ivory gulls, together with terns and northern divers. Some laughing-geese passed to the northward in the evening, which may be considered as a sure indication of land in that direction."—P. 217.

On the 14th they took shelter from the fog and a heavy gale in a cove called Browel Cove, in latitude 70°, longitude 130° 19′. It was supposed, the water being brackish, that it proceeded from an immense lake not far from the beach, known by the name of the Esquimaux Lake. Of this large sheet of water Dr. Richardson gives the following account:

"Taking for granted that the accounts we received from the natives were (as our own observations led us to believe) correct, Esquimaux Lake is a very extensive and curious piece of water. The Indians say that it reaches to within four days' march of Fort Good Hope; and the Esquimaux informed us that it extends from Point Encounter to Cape Ba-

thurst, thus ascribing to it an extent from north to south of more than one hundred and forty miles, and from east to west of one hundred and fifty. * * * If a conjecture may be hazarded about the original formation of a lake which we had so few opportunities of examining, it seems probable that the alluvial matters brought down by the Mackenzie and other rivers have gradually formed a barrier of islands and shoals, which, by preventing the free access of the tide, enables the fresh water to maintain the predominance behind it. The action of the waves of the sea has a tendency to increase the height of the barrier, while the currents of the rivers and ebb tide preserve the depth of the lake. A great formation of wood-coal will, I doubt not, be ultimately formed by the immense quantities of drift-timber annually deposited on the borders of Esquimaux Lake."—P. 228.

On the 15th they made a traverse of ten miles across an inlet, the water of which, running out in a strong current, and nearly fresh, was supposed to be another communication of the Esquimaux Lake with the sea. They named it Russell Inlet. The latitude was 70° 12′, and the longitude 129° 21′; and here the main-land trended, as they wished, to the southeast; for, having passed the low coasts and shoals which extend as far as the lake continues, it was expected that the obstruction to their progress would cease, as in the whole of this distance they had to cross channels of shallow water, encumbered with banks of shingle, and the water more fresh than salt.

On the 18th, sailing between some islands and the main, a large party of Esquimaux rushed out to the shore, brandishing their knives, using threatening expressions, and forbidding them to land. But on Richardson bawling out "barter," they were peaceful in a moment, and brought such goods as they possessed on board: so easily are savages managed by judicious treatment.

"The females, unlike those of the Indian tribes, had much handsomer features than the men; and one young woman of the party would have been deemed pretty even in Europe. Our presents seemed to render them perfectly happy, and they danced with such ecstasy in their slender boats as to incur, more than once, great hazard of being overset. A bundle of strings of beads being thrown into an oomiak, it was caught by an old woman, who hugged the treasure to her

breast with the strongest expression of rapture, while another elderly dame, who had stretched out her arms in vain, became the very picture of despair. On my explaining, however, that the present was for the whole, an amicable division instantly took place; and to show their gratitude, they sang a song to a pleasing air, keeping time with their oars. They gave us many pressing invitations to pass the night at their tents, in which they were joined by the men; and to excite our liberality, the mothers drew the children out of their wide boots, where they are accustomed to carry them naked, and holding them up, begged beads for them. Their entreaties were, for a time, successful; but, being desirous of getting clear of our visitors before breakfast-time, we at length told them that our stock was exhausted, and they took leave."—P. 225, 226.

At one of their halting-places, the interesting little anecdote of the snow-bunting's nest, mentioned by Captain Lyon, could not fail to be brought to their recollection by the following incident:

"In taking wood to make a fire from a large pile of drift-timber which had been collected by the Esquimaux, the nest of a snow-bird, containing four young, was discovered. The parent-bird was at first scared away, but affection for its offspring at length gave it courage to approach them with food; and, as it was not molested, it soon became quite fearless, and fed them with the larvæ of insects, while the party were seated at breakfast close by the nest."—P. 235.

Through a small opening in the land, which with the main formed Harrowby Bay, the boats passed with great difficulty, being nearly barred up; and the moment they had crossed the bar, the water was greenish and perfectly salt. The eastern point of the passage lies in latitude 70° 30′, longitude 127° 35′; and Point Bathurst proved to be the most northerly part of the main they approached during the voyage. From this point the coast trended southeast into Franklin's Bay, in latitude 69° 20′; rose on the east to Cape Parry, in latitude 70° 5′; descended again to Darnley Bay, in latitude 69° 35′, the eastern cape of which is in latitude 69° 45′, from whence the main shore gradually trends to the southward of east, *steep to*, and bold, with here and there a small bay and projecting point, till it reaches Cape Krusenstern, previous to which the party passed through a broad channel, named the Union and Dolphin

Strait, and formed between a long tract of elevated land to the northward and the main shore, to which was given the name of Wollaston Land. In this strait they were impeded, and the Dolphin was nearly crushed, by two masses of ice.

As soon as she was rendered sea-worthy they proceeded, but the flood tide set with such velocity round a rocky point, and brought with it so much ice, that it was thought prudent to put ashore. The violent eddies in the currents there, the doctor says, "reminded us forcibly of the poet's description of Scylla and Charybdis." The navigation of the Dolphin and Union Strait, he says, would be dangerous to ships, from the many sunken rocks which we observed near the southern shore.

A little beyond the strait is a rocky promontory, to which Dr. Richardson gave the name of Cape Krusenstern, in honor of the distinguished Russian hydrographer; its latitude was 68° 23′ N., longitude 113° 45′ W., and it is the most eastern part of the land which they coasted. From this point the coast trends to the southwest, and appears as if forming the western side of what is called in the charts George the Fourth's Coronation Gulf, a mistake occasioned by bringing the letters of the title on the chart too far to the westward; to the southward of it is Cape Hearne, which Franklin and Richardson, in a former visit to the mouth of the Copper Mine, saw only at a distance, appearing as an island. To the southward of Cape Hearne is the mouth of the Copper Mine River. Richardson now announced to the men that a short traverse would bring them to the mouth of this river. "The gratifying intelligence," he says, "which we now conveyed to them was totally unexpected, and the pleasure they experienced found vent in heartfelt expressions of gratitude to the Divine Being for his protection on the voyage."

The south coast of the Polar Sea could not be expected to produce much variety of objects in the vegetable part of the creation, remarkable either for their utility or beauty. Dr. Richardson thus sums up what he observed, or collected, on the portion traversed by him, which he estimates at about nine hundred miles:

"We noticed on the coast about one hundred and seventy *phænogamous*, or flowering plants, being one fifth of the number of species which exist fifteen degrees of latitude farther to the southward. The grasses, bents, and rushes constitute only one fifth of the number of species on the coast, but the two former tribes actually cover more ground than all the rest of the vegetation. The cruciferous or cross-like tribe afford one seventh of the species, and the compound flowers are nearly as numerous. The *shrubby plants* that reach the sea-coast are the common juniper, two species of willow, the dwarf birch, the common alder, the hippophæ, a gooseberry, the red bearberry (*Arbutus uva ursi*), the Labrador tea-plant, the Lapland rose, the bog whortleberry, and the crowberry. The kidney-leaved oxyria grows in great luxuriance there, and occasionally furnished us with an agreeable addition to our meals, as it resembles the garden-sorrel in flavor, but is more juicy and tender. It is eaten by the natives, and must, as well as many of the cress-like plants, prove an excellent corrective of the gross, oily, rancid, and frequently putrid meat on which they subsist. The small bulbs of the Alpine bistort, and the long, succulent, and sweet roots of many of the Astragaleæ, which grow on the sandy shores, are eatable, but we did not learn that the Esquimaux were acquainted with their use. A few clumps of white spruce-fir, with some straggling black spruces and canoe-birches, grow at the distance of twenty or thirty miles from the sea, in sheltered situations on the banks of rivers."—P. 264, 265.

In concluding his account of the sea voyage, Dr. Richardson adds the following paragraph, which is highly creditable to Mr. Kendall, the assistant surveyor:

"The completion of our sea voyage so early in the season was a subject of mutual congratulation to us all; and to Mr. Kendall and myself it was highly gratifying to behold our men still fresh and vigorous, and ready to commence the laborious march across the barren grounds, with the same spirit that they had shown in overcoming the obstacles which presented themselves to their progress by sea. We all felt that the comfort and ease with which the voyage had been performed were greatly owing to the judicious and plentiful provision of stores and food which Captain Franklin had made for us; and gratitude for his care mingling with the pleasure excited by our success, and directing our thoughts more strongly to his party, the most ardent wishes were expressed that they might prove equally fortunate. The correctness of Mr. Kendall's reckoning was another source of pleasure. Having been deprived of the aid of chronometers by the

breaking of the two intended for the eastern detachment of the expedition during the intense winter cold, our only resource for correcting the dead reckoning was lunar observations, made as frequently as opportunities offered; yet when we approached the Copper Mine River, Mr. Kendall's reckoning differed from the position of that place, as ascertained on Captain Franklin's former expedition, only twenty seconds of time, or about two miles and a half of distance, which is a very trifling difference when the length of the voyage and the other circumstances are taken into consideration. The distance between Point Separation and the mouth of the Copper Mine River, by the route we pursued, is nine hundred and two statute miles."—P. 261, 262.

Having thus completed their voyage by arriving at the mouth of the Copper Mine River, and again noticed the capes and islands seen from thence jointly by Richardson and Franklin on a former occasion, and now having certified to be land what was then only conjecture, they proceeded up the river as far as the Bloody Falls, above which, for about forty miles, the river was found to be so full of rapids, and to flow over such an uneven and rocky bed, and its current so precipitous, as to be wholly impracticable to ascend it in boats of a greater draught than a few inches. They therefore left the Union and the Dolphin boats at the Bloody Fall, stowing in them a number of small articles for the use of the Esquimaux who frequent this spot; and having distributed among the party a certain quantity of pemmican, portable soup, and other articles of provision, the whole amounting to about seventy pounds to each man, they set out on foot for Dease's River, on Great Bear Lake. A boat had been appointed to convey them across the lake to Fort Franklin. By this plan a journey would be saved of three hundred miles, and of three weeks, which a walk round the lake would have required; besides, it spared them, in addition to much fatigue and suffering, the wear and tear of their small stock of shoes, almost already exhausted, and of their clothing, which was but ill adapted for the frosty nights of September.

Some little delay occurred in the arrival of the boat on Dease's River, but they reached Fort Franklin on the 1st of September, "and received a warm welcome

from Mr. Dease, after an absence of seventy-one days, during which period we had traveled by land and water one thousand seven hundred and nine geographical, or nineteen hundred and eighty statute miles." Dr. Richardson adds :

"Having now brought the narrative of the proceedings of the eastern detachment to a conclusion, the pleasing duty remains of expressing my gratitude to the party for their cheerful and obedient conduct. Not a murmur of discontent was heard throughout the voyage, but every individual engaged with alacrity in the laborious tasks he was called upon to perform. Where all behaved with the greatest zeal, it would be invidious to particularize any; and I am happy to have it in my power to add, that since our return to England, Gillot (coxswain), Tucker (carpenter), and Tysoe (marine), who were in H.M.'s service previous to their being employed on the expedition, have been rewarded by promotion. Our good-natured and faithful Esquimaux friend, Ooligbuck, carried with him to his native land the warmest wishes and esteem of the whole party. His attachment to us was never doubtful, even when we were surrounded by a tribe of his own nation.

"The general abilities and professional skill of my companion, Mr. (now Lieutenant) Kendall, are duly appreciated in higher quarters, and can derive but little luster from any eulogium from me; but I can not deny myself the gratification of recording my deep sense of the good fortune and happiness I experienced in being associated with a gentleman of such pleasing manners, and one upon whose friendly support and sound judgment I could, with confidence, rely on occasions of difficulty and doubt inseparable from such a voyage."—P. 283.

This kind-hearted and most amiable man, Dr. Richardson, could not pass over the incident of bestowing on a bay the name of Franklin without recording a kind and well-deserved compliment to that highly meritorious officer.

"It would not be proper, nor is it my intention, to descant on the professional merits of my superior officer; but, after having served under Captain Franklin for nearly seven years, in two successive voyages of discovery, I trust I may be allowed to say, that however high his brother officers may rate his courage and talents, either in the ordinary line of his professional duty or in the field of discovery, the hold he acquires upon the affections of those under his command, by a continued series of the most conciliating attentions to their feelings,

and a uniform and unremitting regard to their best interests, is not less conspicuous. I feel that the sentiments of my friends and companions, Captain Back and Lieutenant Kendall, are in unison with my own when I affirm that gratitude and attachment to our late commanding officer will animate our breasts to the latest period of our lives."—P. 236, 237.

That gratitude and attachment here expressed were returned in full measure to Dr. Richardson, not only by the commanding officer, but by every individual employed on the two voyages, and also by the natives with whom they had intercourse, and by whom his uniform kindness and humanity were duly appreciated. Franklin always acknowledged that to his energy of character and promptitude of action are to be ascribed the safety, not alone of himself, but of the surviving party of the first expedition, to insure which, in fact, he risked his own life, and made a sacrifice of the best feelings of his benevolent nature.

Yet, by some unaccountable accident or oversight, this excellent officer was not honored with that distinction which was conferred on his companions, Sir John Franklin and Sir George Back. But, whatever the cause of the omission may have been, it has at length been rectified by an application of Lord Haddington to Sir James Graham, to solicit her majesty to confer on him the honor of knighthood, which has been graciously granted.

To return to the general narrative, of which little now remains to be said: The end of September having arrived, it was deemed expedient to pass a great part of another winter at Fort Franklin. It proved a severe one. By a record in Franklin's journal, the thermometer on the morning of the 7th of February descended to —58°; it had been —57°·5 and —57°·3 thrice in the course of this and the preceding day; between the 5th and 8th its general state was from —48° to —52°, though it occasionally rose to —43°.

No time, however, was lost in the commencement of breaking up the party. Dr. Richardson was the first to depart; he left in December, for the purpose of joining Mr. Drummond, the assistant botanist, in the Saskatchawan River, that he might have the benefit of an ear-

lier spring than at Fort Franklin to collect plants. On the 16th of February Augustus and two Dog-rib Indians were sent forward. On the 20th Captain Franklin left the fort, accompanied by five of his men and two Indians; and Commander Back was directed to proceed to York Factory, thence by the Hudson's Bay ship to England, taking with him the British party, and sending the Canadians to Montreal.

"On quitting Norway House," says Franklin, "we took leave of our worthy companion Augustus. The tears which he shed at our parting, so unusual in those uncultivated tribes, showed the strength of his feelings, and I have no doubt they proceeded from a sincere affection; an affection which I can venture to say was mutually felt by every individual." This most excellent young man and Ooligbuck were to be conveyed to Churchill to rejoin their families, and Franklin took care that the pay due to them was handed over to the directors of the Hudson's Bay Company, to be distributed to them annually in the way suited to their wants.

It may be proper here to introduce a few words in favor of a neglected and unwarrantably despised race of men, the Esquimaux. A few samples may suffice, and better need not be sought for than those of Augustus, Junius, Ooligbuck, and Sackhouse; and among the females, Iligliuk. Of these, Ooligbuck was the only male that survived the period of the expeditions herein detailed, and he subsequently accompanied Dease and Simpson, and is highly spoken of by them for his honesty, fidelity, and utility. Richardson greatly esteemed him. Junius is supposed to have perished on Franklin's first expedition, by losing his way, and dying of cold and hunger; and Augustus, of whom too much can not be said, also perished in the same way, in his attempt to join Commander Back, as will be seen in the following chapter.

On hearing that Captain Back was in the interior, proceeding toward the sea-coast, poor Augustus set out on foot, in company with two others, from Hudson's Bay, to join him; they parted, and for a long time nothing was heard of him, but a note from one of the Company's servants said, "I apprehend that poor Augustus has been

starved to death."* Such was the miserable end of poor Augustus—"a faithful, disinterested, kind-hearted creature, who had won the regard of all."

Sackhouse was also a most amiable and intelligent young man, who died peaceably among the friends he had acquired in Scotland, and of whom there is an interesting biographical memoir in Blackwood's Magazine, supposed to have been written by the late Captain Basil Hall. Brought to Leith in a whaling-ship, the owners, pleased with his manners, paid him every attention, had him taught a little English, and sent him back the following season, to remain or not, according to his own desire. His sister had died in his absence, and having no other relative living, he determined to abandon his country and to return. On arriving at Leith he was met by Mr. Nasmyth, the artist, who, finding he had a taste for drawing, kindly offered him his instructions. On the recommendation of Captain Hall, he was engaged as interpreter on the first Arctic voyage, and proved so useful that he was appointed for the second voyage. In the mean time he visited his kind friends in Edinburgh. In pursuit of his studies, and in the midst of happiness, he was seized with an inflammatory complaint, which carried him off in a few days.

He is described as possessing a pleasing simplicity of manners, a countenance expressive of good humor, to have been fond of society, and always desirous of learning something. His kindness to children was very striking: two of these he fell in with on a snowy day at some distance from Leith, shivering with cold. Sackhouse took off his jacket, and carefully wrapping them in it, brought them safely home. When sensible of his approaching end, he thanked his friends around him for all their kindness, but said it was of no avail, for his sister had appeared to him and called him away.

The writer says he was unaffectedly pious, and when death was approaching, he held in his hand an Icelandic Catechism till his strength and sight failed him, when the book dropped from his grasp, and he shortly afterward expired.

But if any doubt could be entertained as to the supe-

* See Back's account of the fate of this excellent man.

riority of the Esquimaux over all other races of people whom we are pleased to call savages, let us turn to the pages of Parry, where he describes the superior intellectual faculties of that extraordinary woman Iligliuk, who in a moment was made to comprehend the nature of whatever was brought under her notice, and, among other things, that of the compass, as being the means of guiding her hand to pencil out on paper the lines of two extensive coasts, on two opposite sides of the same land, united by a long strait, with islands and other particulars, all of which were found to be sufficiently correct to guide Parry to the object of his research. The eagerness with which her scrutinizing eye was directed to the forge, and the operation of welding iron, gave a strong proof of her inquisitive and sagacious mind. Her son was little inferior to herself in mental capacity.

Indeed, the order, good conduct, and skill* of the people, from whom Parry received so much useful information, and their superiority over the general class of human beings, can not be denied; nor that the means of instruction alone are wanting to bring them rapidly into a state of civilization; but so long as they continue to be hemmed in to the distance of not many miles from the sea-coast, and by hostile and unenlightened tribes in the interior, their time and their energies are wholly employed in the means of self-defense, and self-preservation from famine. Parry has justly contrasted those dark vices of savage life, ferocious cruelty, resentment, and revenge in the Indian, with the gentle Esquimaux:

"When viewed more nearly in their domestic relations, the comparison will, I believe, be still more in their favor. It is here as a social being, as a husband and the father of a family, promoting within his own little sphere the benefit of that community in which Providence has cast his lot, that the moral character of a savage is truly to be sought; and who can turn without horror from the Esquimaux, peaceably seated after a day of honest labor with his wife and children in their snow-built hut, to the self-willed and vindictive Indian, wantonly plunging his dagger into the bosom of the helpless woman whom nature bids him cherish and protect?"

Mr. Drummond is the only one of the party that now remains to be noticed. From Cumberland House he ac-

* Displayed in their construction of snow-built houses.

companied the Company's boats with a brigade of traders for the Columbia, determined to proceed with them as far as the Rocky Mountains. To Carlton House is two hundred and sixty miles. Leaving this on the 1st of September, they proceeded to Edmonton, which is about four hundred miles, and reached it on the 20th of that month. One hundred miles farther brought them to Assinaboin on the Red-deer River. From thence they proceeded up this river to the mountains; but the canoe being much lumbered, it was necessary that some of the party should travel by land; "and of that number," says Mr. Drummond, "I volunteered to be one." A heavy fall of snow rendered the march very fatiguing, and what with the woods and swamps, the horses became useless before they got half way. About the end of December he took up his winter quarters on the Baptiste, a stream which flows into the Red-deer River. On the journey he says he obtained a few mosses, and on Christmas day had the pleasure of finding a very minute *Gymnostomum*, hitherto undescribed:

"In the winter I felt the inconvenience of the want of my tent, the only shelter I had from the inclemency of the weather being a hut built of the branches of trees. Soon after reaching our wintering ground provisions became very scarce, and the hunter and his family went off in quest of animals, taking with them the man who had charge of my horses, to bring me a supply as soon as they could procure it. *I remained alone for the rest of the winter, except when my man occasionally visited me with meat; and I found the time hang very heavy, as I had no books, and nothing could be done in the way of collecting specimens of natural history.* I took, however, a walk every day in the woods, to give me some practice in the use of snow-shoes. The winter was very severe, and much snow fell until the end of March, when it averaged six feet in depth; in consequence of this I lost one of my horses, and the two remaining ones became exceedingly poor. The hunter was still more unfortunate, ten of his young colts having died."—P. 310.

In the beginning of April, 1826, a fatiguing march brought him to the Columbia portage in six days, and here he received letters from Dr. Richardson, accompanied with his tent, a little tea and sugar, and some more paper for his plants. About this time his hunter sent

him word that he had changed his mind, and would not accompany him into the mountains. His plans were thus deranged, yet he had no alternative but to remain with the man, who had charge of the horses used on the Columbia portage, "and to botanize in that neighborhood." He resolved, however, to proceed.

"On the 10th of August I set out with another hunter, upon whom I had prevailed to conduct me to the Smoking River, although, being disappointed in a supply of ammunition, we were badly provided. We traveled for several days without meeting with any animals, and I shared the little dried provision which I had with the hunter's family. On the 15th we killed a mountain sheep, which was quickly devoured, there not being the smallest apprehension at the time that famine would overtake us. Day after day, however, passed away without a single head of game of any description being seen, and the children began to complain loudly; but the hunter's wife, a young half-bred woman, bore the abstinence with indifference, although she had two infant twins at the breast. On the 21st we found two young porcupines, which were shared among the party; and two or three days afterward a few fine trout were caught. We arrived in the Smoking River on the 5th of September, where the hunter killed two sheep, and a period was put to our abstinence, for before the sheep were eaten he shot several buffaloes."—P. 311.

He next proceeded along the mountains, and had reached the head waters of the Peace River, when a heavy fall of snow stopped his collecting plants for that season. Desirous, however, of crossing the mountains to the Columbia River, he determined to accompany the Columbia brigade on its arrival. He reached the portage on the 9th of October, and the following day brought him an order from Captain Franklin to descend in the spring of 1827, to rejoin the expedition on its way to York Factory. He therefore went with the brigade merely to the west end of the portage, and returned on the 1st of November. The snow was too deep to permit him to add much to his collections in this hasty trip over the mountains; "but it was impossible," he says, "to avoid remarking the great superiority of climate on the western side of that lofty range. From the instant the descent toward the Pacific commences, there is a visible improvement in the growth of timber, and the va-

riety of forest-trees greatly increases. The few mosses that I gleaned in the excursion were so fine, that I could not but deeply regret that I was unable to pass a season or two in that interesting region."

Another dispatch was received from Dr. Richardson, requesting him to join him at Carlton House in April, which he accordingly reached on the 5th. "We suffered much from snow-blindness on the march, the dogs failed from want of food, we had to carry the baggage on our backs, and had nothing to eat for seven days." All this is told with the greatest placidity. He seems only to regret that he had done so little. Yet this modest naturalist says, "My collections on the mountains amounted to about fifteen hundred species of plants, one hundred and fifty birds, fifty quadrupeds, and a considerable number of insects."

Captain Franklin and his party, having embarked in the packet from New York, arrived at Liverpool on the 24th of September, after an absense of two years, seven months and a half. Commander Back, Lieutenant Kendall, and Mr. Drummond, with the rest of the party, arrived at Portsmouth on the 10th of October. Franklin and Richardson arrived in London on the 29th of September, when the charts and surveys were laid before his royal highness the lord-high-admiral.

Under the guidance of such men as those employed on the last two expeditions, it is not necessary to say a word on the manner in which they have been conducted. Information has been obtained in every department of science, and quite sufficient as to the main point on which they were undertaken, namely, in general terms, "to amend the defective geography of the northern coast of America." The Arctic voyages having commenced, and as it was not unlikely that Parry, on his second voyage, would make an attempt to proceed along that coast, it was deemed advisable that an examination should be undertaken from the mouth of the Copper Mine River to the eastern part of the coast. The question has now been settled. The whole coast-line is one continued series of rocky islets, with channels between them mostly choked with ice, the sea beyond them also covered with ice, in the shape of floes and hommocs;

reefs of rocks parallel with the beach, their intermediate channels shallow, and in many places not navigable even by boats; the weather foggy and stormy, with violent gales of wind, so that Franklin says, after dragging his boats 374 miles to the westward of Mackenzie's River, "in all that space not a harbor exists in which a ship could find shelter." Dr. Richardson notices but one spot in the course of 800 miles—the strait of the Dolphin and Union—in which there is water for large vessels; but he says, "the navigation of it would be dangerous to ships, from the many sunken rocks which we observed near the southern shore."

Dease and Simpson held out no encouragement for ship navigation near the coast, and they found the western portion of it, beyond the point to which Franklin advanced, rocky, shallow, and muddy on and near the beach, and the sea generally loaded with heavy ice. Geography and natural history have gained very largely by these expeditions; and to these may be added meteorology in all its aspects, including magnetism and electricity.

CHAPTER XII.

COMMANDER BACK.

1833–34–35.

Journal of a Land Expedition to the Eastern Part of the Polar Sea, through North America to the Mouth of Back's River.

To those readers who have made themselves familiar with the extraordinary and painfully-interesting adventures of Franklin and Richardson within the Arctic regions of North America, and along the shores of the Polar Sea, the name of Back, the associate and sharer of all their privations and sufferings, must also be familiar. In voluntarily undertaking the present expedition, he was fully aware of what he would probably, nay, most certainly have again to encounter—similar hardships in

his progress through the same country. The motive was no less honorable to his heart than the act itself was to his unflinching courage.

Being in Italy, a rumor, he says, reached him from England that apprehensions were entertained for the safety of the two Ross's, the uncle and nephew, on the hearing of which (with a true chivalrous spirit) he hastened home, for the purpose of offering his services to government for the conduct of an expedition in search of them; and his offer was accepted. He received a letter from Lord Goderich, acquainting him that the Lords of the Admiralty had been pleased to transfer his services to the Colonial Department, to conduct the expedition in question, and he was directed to undertake it, and also to place himself at the disposition of the governors and committee of the Hudson's Bay Company, who would be desired to furnish him with the requisite resources and supplies.

A medical person being required to take care of the health of the party, Mr. Richard King, in the first instance, volunteered his services, and was subsequently engaged, at a salary, as surgeon and naturalist to the expedition. Three men only (two of whom were a carpenter and a shipwright) were taken from England. These five persons left on the 17th of February, 1833, for Liverpool, to proceed from thence in the packet to New York, and thence to Albany and Montreal. As the route usually followed by the Company's servants to the Great Slave Lake is the same as that of Sir A. Mackenzie, Commander Back observes that a detail of his progress so far seems to be unnecessary, that being the point from which, he adds, the discovery properly begins.

He had, however, a long journey before him from Norway House, where preparations of men, and boats, and sledges were made under the direction of Governor Simpson, to Slave Lake; and it would be unjust to slur over altogether a fatiguing journey through one of the most dangerous and detestable countries on the face of the earth—the numerous sufferings from cold and famine, and other hardships of various descriptions, which he knew from former experience he would have to encoun-

ter, and all of which he bore with a degree of cheerfulness and good humor peculiar to himself. Guided by the noble example of his former colleagues, Franklin and Richardson, he never shrunk from difficulties, never murmured, never desponded. Like a true British seaman, the greater the danger, the more firmly he stuck to the bark, determined to hold on, sink or swim. The praiseworthy object alone which he had in view took full possession of his mind; and when he found at Norway House that no less than twenty men, composed of steersmen, carpenters, artillerymen, &c., had been already collected to accompany him, he gives vent to this generous burst of exultation:

"This was a happy day for me; and as the canoe pushed off from the bank, my heart swelled with hope and joy. Now, for the first time, I saw myself in a condition to verify the kind anticipations of my friends. The preliminary difficulties had been overcome; I was fairly on the way to the accomplishment of the benevolent errand on which I had been commissioned; and the contemplation of an object so worthy of all exertion, in which I thought myself at length free to indulge, raised my spirits to more than an ordinary pitch of excitement."—P. 57, 58.

The only disappointment he felt, but, at the same time, one that amused him, was the loss of two Canadians, former acquaintances, who presented themselves, almost breathless with haste, as candidates for the service, were accepted, and their agreements directed to be made out. Their wives, however, took different but equally effectual methods to prevent their completion, and to keep their husbands at home:

"The one, a good strapping dame, cuffed her husband's ears with such dexterity and good will, that he was fain to cry *peccavi*, and seek shelter in a friendly tent; the other, an interesting girl of seventeen, burst into tears, and with piteous sobs clung to the husband of her love, as if she would hold him prisoner in her arms. I had, therefore, to look elsewhere."—P. 55.

He describes the odd assemblage of articles that were huddled together in his tent; "nor was my crew," he says, "less motley than the furniture. It consisted of an Englishman, a man from Stornoway, two Canadians, two métifs, and three Iroquois Indians. Babel itself

could not have produced a worse confusion of unharmonious sounds than was the conversation they kept up."

A whole fleet of Indian canoes was met with, whose chief, an intelligent-looking old man, named by the traders "Le Camarade de Mandeville," was stated to have an extensive knowledge of the country to the northward of the Great Slave Lake. He was brought with his Indians to Back's encampment, for the purpose of giving him some information of the river he was about to descend to the sea-coast. With all befitting ceremony, preliminaries were opened by the customary pipe; for, as Back observes, "a social puff is to an Indian what a bottle of wine is to an Englishman—*aperit præcordia*—it unlocks the heart and dissipates reserve." He thus sketches the inmates of one of the chief's canoes:

"The *tout ensemble* of this 'people,' as they with some vanity style themselves, was wild and grotesque in the extreme. One canoe, in particular, fixed my attention; it was small even for a canoe; and how eight men, women, and children contrived to stow away their legs in a space not more than large enough for three Europeans, would have been a puzzling problem to one unacquainted with the suppleness of an Indian's unbandaged limbs. There, however, they were, in a temperature of 66°, packed heads and tails, like Yarmouth herrings—half naked—their hair in elf-locks, long and matted—filthy beyond description—and all squalling together. To complete the picture, their dogs, scarce one degree below them, formed a sort of body-guard on each side of the river; and as the canoe glided away with the current, all the animals together, human and canine, set up a shrill and horrible yell."—P. 79.

One of the half-breeds, named De Charloit, is described as being a dexterous canoe-man in passing rapids: Back's canoe, though frail, and too weak to encounter rude shocks, "was nevertheless threaded through the boiling rapids and sunken rocks with fearful elegance: the cool dexterity with which she was managed was truly admirable."

As they proceeded, the chief, "Le Camarade," gave them some information regarding the river, but it was difficult to make out the bearings of the plan he sketched; and when Back attempted to question and assist him, he at last peevishly exclaimed "that *we* did not

place the world as it was, whereas *he* kept steadily to the rising and setting sun." The river, however, is stated to have been graphically portrayed by him, as originating in rapids; narrow, shoal, and dangerous; destitute of wood, even for fuel; full of perilous cascades and falls; and that, after a course more tortuous than that of any river known to the oldest and most experienced of their tribe, it tumbled over its northern barrier in a foaming cataract into the sea.

The party was now approaching the highlands, from which the waters take an opposite course, and from whence the labors which Back says had hitherto been so cheerfully undergone (being little more than those to which *voyageurs* are accustomed) were now to be changed into extraordinary efforts and patient perseverance. Cascades and rapids followed each other in quick succession. To avoid them, it was necessary, with infinite labor, to force their way through woods of stunted swamp-fir, clambering over the fallen trees through rivulets and across swamps, getting on as well as the burdens they were obliged to carry would permit; and when they emerged, all was barren and desolate. On gaining, however, the summit of the pass, which divides the waters, and is of great height, such was the beauty of the varied outline on the northern side, "that we were captivated into a momentary forgetfulness of our fatigue." But fatigue alone was not the main cause of their suffering:

"The laborious duty which had been thus satisfactorily performed was rendered doubly severe by the combined attack of myriads of sandflies and musquetoes, which made our faces stream with blood. There is certainly no form of wretchedness, among those to which the checkered life of a *voyageur* is exposed, at once so great and so humiliating as the torture inflicted by these puny blood-suckers. To avoid them is impossible; and as for defending himself, though for a time he may go on crushing them by thousands, he can not long maintain the unequal conflict; so that at last, subdued by pain and fatigue, he throws himself in despair with his face to the earth, and, half suffocated in his blanket, groans away a few hours in sleepless rest."—P. 117.

Again he says,

"After a hard day's work, my weary crew were happy to

encamp, notwithstanding the vigorous and unintermitting assaults of our faithful tormentors, the sandflies and musquetoes. Certainly they were pests, and sharply did they convey to us the moral lesson of man's helplessness; since, with all our boasted strength and skill, we were unable to repel these feeble atoms of the creation."—P. 134.

Of the sandflies near the lakes and in the valleys he gives a most appalling account. He says,

"How can I possibly give an idea of the torment we endured from the sandflies? As we dived into the confined and suffocating chasms, or waded through the close swamps, they rose in clouds, actually darkening the air: to see or to speak was equally difficult, for they rushed at every undefended part, and fixed their poisonous fangs in an instant. Our faces streamed with blood, as if leeches had been applied, and there was a burning and irritating pain, followed by immediate inflammation, and producing giddiness, which almost drove us mad. Wherever we halted, which the nature of the country compelled us to do often, the men, even Indians, threw themselves on their faces, and moaned with pain and agony; for the time, I thought the tiny plagues worse even than musquetoes."—P. 179.

Even the Indians have never been able to contrive any means of extirpating these tormenting creatures, or of escaping from their wounds. Their usual mode is to throw themselves on their faces to the ground, and to scream or moan with pain and agony. Back thought of getting rid of them by filling his tent with smoke, which brought to the recollection of a former attendant that the *old chief* (Franklin) would not destroy a single musquetoe. On which Back says,

"It was the custom of Sir John Franklin never to kill a fly; and, though teased by them beyond expression, especially when engaged in taking observations, he would quietly desist from his work, and patiently blow the half-gorged intruders from his hands: 'the world was wide enough for both.' This was jocosely remarked upon at the time by Akaitcho and the four or five Indians who accompanied him; but the impression, it seems, had sunk deep, for on Maufelly's seeing me fill my tent with smoke, and then throw open the front and beat the sides all round with leafy branches, to drive out the stupefied pests before I went to rest, he could not refrain from expressing his surprise that I should be so unlike the *old chief*, who would not destroy so much as a single musquetoe."—P. 180.

A native Indian, who had left his party at the mountains, and lost the only two charges of powder in his possession, and was therefore helpless, had been driven by necessity to follow the travelers a long journey, as the only chance of obtaining the means of sustaining his family till he could return to his friends. "Had there been only my wife with me," he said in a faint voice, "I would not have troubled the chief, for we could have lived upon berries; but when I looked on my child, and heard its cries, my heart failed me, and I sought for relief." There needed no other appeal to Commander Back; he furnished the poor man with a liberal supply of provisions and ammunition, and the poor fellow went away the happiest of his tribe.

Having now reached the eastern shore of the Great Slave Lake, Mr. M'Leod was directed to prepare a building for their winter reception, after Back's return from the discovery of the source of the river which was to convey him to the sea-coast. He set out for this purpose, and after crossing numerous lakes, rapids, rivers, and frightful cataracts, arrived at a lofty hill, and from it saw a lake, out of which he was told one of the branches of the sought-for river issued. He here saw only a few geese, one gull, and many terns, and musquetoes like the fourth plague—innumerable. "No other living thing was seen or heard; the air was calm, the lake unruffled; it seemed as if Nature had fallen into a trance, for all was silent and motionless as death." The splendid lake was named Aylmer.

The river which Back had now to descend was called by the natives Thlew-ee-choh, or the Fish River, and since has very properly been described by the Geographical Society, and in the charts, by the name of *Back's River*, he having been the first European who had descended it. When he was fully satisfied, by one of the guides, that he had reached one of its feeders, he says, "yielding to that pleasing emotion which discoverers, in the first bound of their transport, may be pardoned for indulging, I threw myself down on the bank and drank a hearty draught of the limpid water." The main stream was speedily approached, and, as the month of August had expired, it became expedient, nay,

imperative (having made this discovery), to return to Fort Reliance on Slave Lake, there to take up his winter quarters; and here he found the framework erected of a convenient house, which, by the assistance of numerous workmen which Mr. M'Leod had assembled, was speedily completed.

"Our hall was in a manner filled with invalids and other stupidly-dejected beings, who, seated round the fire, occupied themselves in roasting and devouring small bits of their reindeer garments, which, even when entire, afforded them a very insufficient protection against a temperature of 102° *below the freezing point* (70° below zero). The father torpid and despairing; the mother with a hollow and sepulchral wail, vainly endeavoring to soothe the infant which, with unceasing moan, clung to her shriveled and exhausted breast, the passive child gazing vacantly around: such was one of the many groups that surrounded us."—P. 218.

Those scenes of misery among the poor natives, for want of food and fuel, were more distressing to the feeling heart of Back than any privation that could happen to himself. The old, the sick, and the miserable had heard of him, and were not long in finding their way to the house of *the white man*, to obtain that relief from starvation which, in seasons of distress, it would be hopeless to seek for among their own countrymen.

The sufferings of the poor Indians at this period are not to be described. "Famine, with her gant and bony arm," says Back, "pursued them at every turn, withered their energies, and strewed them lifeless on the cold bosom of the snow." Nine had fallen victims, and others were on the eve of perishing, when the old chief Akaitcho came to their relief.

To add to the distress of Back, he received information that his friend Augustus, the former affectionate Esquimaux interpreter, hearing of his being again in the country, set out from Hudson's Bay in company with a Canadian and an Iroquois; they lost their way, were separated, and poor Augustus fell a sacrifice to famine. His remains were found on the barrens not far from the Rivière à Jean. It appeared that the gallant little fellow was retracing his steps to the establishment, when, either exhausted by suffering and privation, or caught in the midst of an open traverse in one of those terrible

snow-storms, which may be almost said to blow through the frame, he had sunk to rise no more. "Such," says Back, "was the miserable end of poor Augustus! a faithful, disinterested, kind-hearted creature, who had won the regard, not of myself only, but, I may add, of Sir J. Franklin and Dr. Richardson also, by qualities which, wherever found, in the lowest as in the highest forms of social life, are the ornament and charm of humanity"—qualities, it must be said, that were found in full vigor in the kind-hearted Back. "Often," said he, on another occasion, "did I share my own plate with the children, whose helpless state and piteous cries were peculiarly distressing. Compassion for the full-grown may or may not be felt, but that heart must be cased in steel which is insensible to the cry of a child for food."

His own party had a full share of the general distress; their rations were deplorably reduced; but this, however, produced no complaining, no sullen or sulky looks in the brave fellows he had engaged in England and in Canada. They had none of those means so skillfully employed by Parry on board ship to keep up the spirits of the men; but no objection was raised to the formation of an evening school; on the contrary, it was considered as an amusement, that tended to the maintenance of their cheerful and general good spirits.

About the middle of April active preparations were begun for their intended journey to the sea-coast; and while so employed, a messenger on the 25th of that month brought a packet for Back, which contained the unexpected and welcome intelligence of the safety of Ross and his party. The hurry and excitement of his feelings on the occasion he thus describes:

"In the fullness of our hearts we assembled together, and humbly offered up our thanks to that merciful Providence which, in the beautiful language of Scripture, hath said, 'Mine own will I bring again, as I did sometime from the deeps of the sea.' The thought of so wonderful a preservation overpowered for a time the common occurrences of life. We had just sat down to breakfast; but our appetite was gone, and the day was passed in a feverish state of excitement. Seldom, indeed, did my friend Mr. King or I indulge in a libation, but on this joyful occasion economy was forgotten; a treat

was given to the men, and for ourselves the social sympathies were quickened by a generous bowl of punch."—P. 245.

On the 7th of June, Back, accompanied by Mr. King, left Fort Reliance, each delighted, as may well be imagined, in escaping from scenes of suffering and death, from heart-rending care and vexatious disappointment. "Before me," he says, "were novelty and enterprise; hope, curiosity, and the love of adventure were my companions; and even the prospect of difficulties and dangers to be encountered, with the responsibility inseparable from command, instead of damping, rather heightened the enjoyment of the moment." On the 28th of June the boat was carried over the last portage which divides the northern streams from the southern ones, into the latter of which she was to be lanched, it being the river which he had discovered, the *Thlew-ee-choh*, or, as appropriately now named, Back's River, and which was to convey them into the Polar Sea.

A singular remark is here made regarding the temperature. About the end of May, just before they set out, the weather was sultry, the temperature in the sun being 106°; an extraordinary contrast, he observes, to that of the 17th of January, when it was 70° below zero! extremes so much in excess from any recorded, that the correctness of the instrument may be doubted. They now experienced the weather to be cold, thick, and foggy. On clearing up, they were overjoyed to discover the branching antlers of twenty reindeer on the summit of the adjacent hills. To see and pursue was the work of a moment.

"It was a beautiful and interesting sight, for the sun shone out, and, lighting up some parts, cast others into deeper shade: the white ice reflected millions of dazzling rays; the rapid leaped and chafed in little ripples, which melted away into the unruffled surface of the slumbering lake; abrupt and craggy rocks frowned on the right; and on the left, the brown landscape receded until it was lost in the distant blue mountains. The foreground was filled up with the ochre-colored lodges of the Indians, contrasting with our own pale tents; and to the whole scene animation was given by the graceful motions of the unstartled deer, and the treacherous crawling of the wary hunters."—P. 307.

Mr. M'Leod had assembled some hunters, to return

to the fort by the best way to meet with musk-oxen, the scarcity of animals increasing as Back proceeded to the north. Among the group of Indians he met with an old acquaintance, formed when with Franklin, who went by the name of Green Stockings, whose mother was afraid that if the portrait he drew of her went to England, the king would send for the original.

"Though surrounded by a family, with one urchin in her cloak clinging to her back, and sundry other maternal accompaniments, I immediately recognized her, and called her by her name; at which she laughed, and said 'she was an old woman now;' begging, at the same time, that she might be relieved by the 'medicine man, for she was very much out of health.' However, notwithstanding all this, she was still the beauty of the tribe; and with that consciousness which belongs to all belles, savage or polite, seemed by no means displeased when I sketched her portrait."—P. 307.

From this time till their approach to the sea, a constant succession of falls, and rapids, and cataracts more or less obstructed their progress, and, as Back says, "made him hold his breath, expecting to see the boat dashed to shivers against some protruding rocks amid the foam and fury at the foot of a rapid." In passing down one of these, where the river was full of large rocks and bowlders, the boat was obliged to be lightened; and Back says, "I stood on a high rock, with an anxious heart, to see her run it. Away they went with the speed of an arrow, and in a moment the foam and rocks hid them from my view. I heard what sounded in my ear like a wild shriek; I followed with an agitation which may be conceived, and, to my inexpressible joy, found that the shriek was the triumphant whoop of the crew, who had landed safely in a small bay below." In short, strong and heavy rapids, with falls and whirlpools, kept the men, for eighty or ninety miles, in a constant state of exertion and anxiety.

He gives an instance on one occasion of the consummate skill of De Charloit, who

"ran our rickety and shattered canoe down four successive rapids, which, under less able management, would have whirled it, and every body in it, to certain destruction. Nothing could exceed the self-possession and nicety of judgment with which he guided the frail thing along the narrow line

between the high waves of the torrent and the returning eddy. A foot in either direction would have been fatal; but with the most perfect ease, and, I may add, elegant and graceful action, his keen eyes fixed upon the *run*, he kept her true to her course through all its rapid windings."—P. 165.

At length, however, they reached the last and most formidable of rapids; and here they fell in with a party of those *treacherous* Esquimaux against whom the Indian chief had so urgently cautioned him. He landed, and notwithstanding their brandished spears, and yells, and wild gesticulations, walked up to them, calling out *teyma*—peace. In an instant their spears were flung on the ground; and, placing their hands on their breasts, they also called out *teyma*. He made them understand they were *Kabloonas*—Europeans, and not Indians; and he says, "as they did not, like their neighbors to the North, go through the ceremony of *rubbing* (not pulling) *noses* by way of salutation, I adopted the John Bull fashion of shaking each of them heartily by the hand." A few presents were given to them; and Back went to their tents, introduced himself to their women and children, and had every reason to believe he had obtained their confidence. Their numbers, he thinks, were altogether about thirty-five.

These good-natured and friendly people were of the most essential service to Captain Back; for information being brought to him from the leading man of the boat that, so perilous was the cataract now to be passed, no boat could descend it, and that the crew were utterly unequal to the task of conveying it over the long and steep portage—"Taking advantage," he says, "of the good humor of our new acquaintances, I requested them to give us a helping hand. The request was cheerfully complied with, and, with their assistance, we succeeded in carrying the boat below the fall, so that, in reality, I was indebted to them for getting to the sea at all."

Having parted from the Esquimaux on the 28th of July, on the following day they got sight of a lofty headland at a great distance to the north, apparently on the eastern side of the river, which they conjectured to be one side of the opening into the sea, and it proved to be so. To this promontory Back gave the name of Victo-

ria, in honor of the princess royal; and on the arrival of the party at this point, Back thus sums up a general view of this impetuous river of rapids, cascades, and cataracts:

"This, then, may be considered as the mouth of the Thlewee-choh, which, after a violent and tortuous course of five hundred and thirty geographical miles, running through an iron-ribbed country, without a single tree on the whole line of its banks, expanding into fine large lakes with clear horizons, most embarrassing to the navigator, and broken into falls, cascades, and rapids to the number of no less than eighty-three in the whole, pours its waters into the Polar Sea in latitude 67° 11′ 00″ N., and longitude 94° 30′ 0″ W.; that is to say, about thirty-seven miles more south than the mouth of the Copper Mine River, and nineteen miles more south than that of Back's River, at the lower extremity of Bathurst's Inlet."—P. 390.

"Sufficient for the day is the evil thereof;" but, with the appalling reflection of having to return up, and in opposition to, no less than eighty-three falls, cascades, and rapids, instead of dashing down them as hitherto, it required no moderate share of firmness and resolution to persevere in the attempt to renew the same route, at so advanced a period as the month of August. A bluff point on the eastern side of the estuary, which he called Cape Hay, he considered to be the northern extreme, but Dease and Simpson subsequently discovered a considerable length of coast beyond it. For ten days the weather continued chilly, wet, and foggy, and the estuary was so blocked up with ice as to prevent any northern progress being made. The shores of this desolate region produced nothing but reindeer-moss and a species of fern, both so soaked with wet that they would not burn, and therefore the party had no means of cooking any thing, not even of boiling a little water for tea. For a whole week they had but one hot meal.

In this cheerless and miserable condition, surrounded on every side by prospects of ice, snow, and complete desolation, without fire or the means of making it—without any kind of warm food, solid or liquid—with heavy showers of rain followed by thick snow, no wonder that Commander Back should say, "It can not be a matter of astonishment, and much less of blame, that even the best

men, benumbed in their limbs, and dispirited by the dreary and unpromising prospect before them, broke out for a moment into low murmurings that theirs was a hard and painful duty."

No one can be surprised that, in such a state of privation and suffering, Back was prevented from carrying into effect, or even undertaking, what had been his intention, viz., that of proceeding coastwise to Point Turn-again, to complete the unfinished part left by Franklin. He sent, however, a small party to the westward to trace the coast, which was all that could be done; but they were only able to follow the shore about fifteen miles with every exertion they could use and the most severe labor, sinking into snow and swampy ground midleg at every step. The surface was level, and void of vegetation. They found, however, several pieces of drift-wood, one of which was nine feet long and nine inches in diameter, which the men jocularly called "a piece of the North Pole." Back was persuaded that the fact of the drift-wood at this point of North America establishes the continuity of the coast from the mouth of the Mackenzie River, and of the current which could alone have brought it.

The drift-wood found on the whole of the southern coast of the Polar Sea, from Mackenzie's River to Point Turn-again, was fully ascertained to have been brought entirely from the westward, not only from the Mackenzie, but also, as we know from Simpson, down the numerous rivers falling from the Rocky Mountains; the easterly current setting through Behring's Strait carries this drift-timber to the extreme easterly end of the American coast. Admiral Krusenstern, in 1823, in reply to a question put to him on this subject regarding two Russian ships that had gone from the coast of Asia into the Strait of Behring, writes, "with respect to the currents in these straits, they have been observed constantly to set on the coast of Asia to the N.W.; near the coast of America, to the N.E.; and off Icy Cape, near which the ships remained four days, *due* east, at the rate of 25 and 30 miles a day."

The extreme point seen to the northward, on the western side of the estuary, Back named Cape Richard-

son, which, he says, is in lat. 68° 46′, long. 96° 20′ W. Another point a little to the westward of this he named Maconochie, and thinks there is reason to believe that between them and Point James Ross a passage exists —a conjecture fully verified by Dease and Simpson having sailed through it in the year 1839. But of the discoveries of these gentlemen hereafter. Captain Back is also correct in describing an open sea to the eastward as far as the spacious eastern extremity of Simpson's Strait, and also beyond it to the Gulf of Akkoolee. As a farther proof of an open sea, free of land, he says that a gale of wind from the eastward swept a whole field of ice from that gulf past Back's Estuary, which, however, a westerly gale brought back again, and it disappeared.

Pinned down as he was to this miserable spot, when nothing more could be done, "I felt," he says, "I had no choice; and, assembling the men, I informed them that the period fixed by his majesty's government for my return had arrived, and it now only remained to unfurl the British flag, and salute it with three cheers, in honor of his most gracious majesty, giving his royal name of William the Fourth's Land to this part of America."

On the 15th of August the ice in the estuary had sufficiently parted to allow the boat to proceed, and with open water and a fair wind, they made about twenty miles to the southward, in commencing their return, "where, for a second time in nine days," Back says, "we partook of a warm meal." The many difficulties they had experienced in falling down the river were at least doubled in the labor of going against the stream; rocks and rapids, and sand-banks, with numerous portages, were all again to be encountered. "One day," Back says, "we ascended between sixteen and twenty rapids." It would be a waste of the reader's time, and a trial of his patience, to repeat what has already been said regarding this river.

Having ascended the high grounds which divide the northern from the southern streams, the Aylmer, the Artillery, and the Clinton Colden Lakes embellish the landscape, and discharge their waters into the Great Slave Lake. Here Back describes, and gives a print of,

a splendid cascade, which he names Parry's Falls, and says it is one of the grandest objects in nature.

"The color of the water varied from a very light to a very dark green; and the spray, which spread a dimness above, was thrown up in clouds of light gray. Niagara, Wilberforce's Falls in Hood's River, the falls of Kakabikka near Lake Superior, the Swiss or Italian falls, although they may each 'charm the eye with dread,' are not to be compared to this for splendor of effect. It was the most imposing spectacle I had ever witnessed; and as its berg-like appearance brought to mind associations of another scene, I bestowed upon it the name of our celebrated navigator, Sir Edward Parry, and called it Parry's Falls."—P. 453.

As they proceeded, the Indians brought them provisions from time to time; and the good old chief Akaitcho, with his followers, though not very successful, was not wanting in his contributions. This old friend to Sir John Franklin was undergoing the usual course which old age and weakness inflict on all the Indian chiefs.

"He is no longer the same active and important person that he was in those days; for, besides the infirmities that have crept upon him, he has grown peevish and fickle. His once absolute authority is consequently reduced to a shadow; and with the exception of his sons and his own family, he can scarcely boast of a single subject or adherent in his summer excursions to hunt. During winter, however, the clan still keep together as formerly."—P. 456.

The Indians believe in the existence of One Great Spirit, who rewards the good and punishes the evil-doer. Back says, that, speaking with the Camarade de Mandeville, a potent Chipewyan chief, regarding the due observance of certain moral precepts for his future guidance, he listened with most profound attention and gravity. Having concluded, he raised his head a little, and, with eyes fixed on the floor, said, in a low and solemn tone, "The chief's words have sunk deep into my heart, and I shall often think of them when I am alone. It is true that I am ignorant; but I never lie down at night in my lodge without whispering to the Great Spirit a prayer for forgiveness, if I have done any thing wrong that day." This heathen may be said to have had no religion, but his feelings and practice were the dictates of a genuine piety.

On the 24th of June Back reached Norway House, and having arranged the Company's accounts, set out for Montreal, where, in his passage through the United States, he received the kindest attentions. He left New York on the 17th of August, and arrived at Liverpool on the 8th of September, after an absence of two years and nearly seven months. Mr. King, with eight of the men, reached England in the Hudson's Bay Company's ship in October. His majesty honored Back with an audience, and expressed his approbation of his efforts, first in the cause of humanity, and next in that of geographical and scientific research.

In glancing over the subjects of natural history mentioned in the Appendix—the quadrupeds, birds, and fishes described in England by Dr. Richardson, the insects by Mr. Children, and the plants by Sir William Hooker —it is impossible not to bestow the highest degree of praise on Mr. King, who, with great exertion and diligence in collecting, and careful attention in preserving them, must have undergone much labor and constant anxiety. Dr. Richardson says, "Those specimens were all carefully prepared by Mr. Richard King, surgeon to the expedition, who deserves the thanks of zoologists for devoting so much time and labor to the promotion of the science."

CHAPTER XIII.

CAPTAIN GEORGE BACK.

1836–37.

Narrative of an Expedition in H. M. S. Terror, undertaken with a view to Geographical Discovery on the Arctic Shores.

This voyage was recommended by the Royal Geographical Society to the colonial secretary, and by him to the Lords of the Admiralty. The object of the society was nearly the same as that on which Captain Lyon had been employed; and the Admiralty having supplied a ship, the Terror, furnished him also with instructions, the general import of which was, that he should proceed in the first instance to Wager River or Repulse Bay, as he should find most expedient; observing, however, that, at Salisbury Island, "you will have to choose between the direct and obvious course up Frozen Strait, which was performed with apparent ease by the Fury and Hecla in 1821, or the more circuitous route by the Welcome, which was unsuccessfully attempted by the Griper in 1824." Captain Back, having this choice, from such high authority—success on the one hand, and failure on the other—could scarcely venture to hesitate in his decision; he unfortunately, though naturally enough, made choice of the former, or easy route. Whichsoever of the two bays, Repulse or Wager, he should be able to reach (and neither of them did he reach), the Terror was to be left with an officer, to take charge of her, and to employ himself in making surveys and observations, while the captain, with a large party, should cross the intervening land to the eastern shore of Prince Regent's Inlet, sending one party to the north as far as the Fury and Hecla Strait, and the other to pursue the continental coast-line to the mouth or estuary of Back's River, and its continuation as far as the Point Turn-again of Franklin. These were the objects of the voyage, as pointed out by the Geographical Society.

The details of the instructions are not necessary to be stated, as the object of them failed; but one remark is made in them, which can not always, however advisable, be complied with: it is their lordships' full belief that all the service detailed may be fully and faithfully performed in the course of the present season, and "that this Arctic expedition may be distinguished from all others by the promptitude of its execution, and by escaping from the gloomy and unprofitable waste of eight months' detention: it is therefore our distinct orders that every effort shall be made to return to England in the fall of this year." The old proverb may here be applied: "Man proposes, but God disposes." Back and his associates not only wintered, but were wedged up by massive ice in the wide ocean for nine whole months, from October to July, four of which were spent on "an icy cradle," as Captain Back graphically calls it; many scenes are also graphically and beautifully expressed, in numerous exquisite prints by Lieutenant (now Captain) Smyth. Yet the Terror has survived it all, was three or four years in the Antarctic Ocean, and is now with Sir John Franklin in the Polar Seas.

On the present occasion she was commanded, officered, and manned as follows:

George Back, Captain.
William Smyth, Owen Stanley, Arch. M'Murdo, } Lieutenants.
Graham Gore, Robert M'Clure, Peter Fisher, } Mates.
Charles Marcuard, Extra Mate.
James Donovan, Surgeon.
J. A. Mould, Assistant Surgeon.
William Lawes, Clerk in Charge.
James Saunders, Acting Master.

12 Officers.
4 Warrant Officers.
13 Petty Officers.
44 Seamen and Marines.
73 Total.

It may as well be at once stated, that Smyth and Stanley are now captains; Fisher and M'Murdo, commanders; Gore, M'Clure, and Marcuard, lieutenants; J. A. Mould, surgeon; Wm. Lawes, paymaster and purser; Jas. Saunders, master.

On the 14th of June, 1836, the Terror left Chatham, and on the 28th of July crossed Davis's Strait. On that evening, when the weather cleared up, Back says, "We observed an enormous iceberg, the perpendicular face of which was not less than 300 feet high." Enormous indeed: in what depth of water could it be, or had it been floating? The next morning is described as beautifully fine, "the tall ship, with all her sails set, threading her graceful way through the masses of ice, upon a sea as smooth as an inland lake." A very different scene quickly succeeded on approaching that universally-detested Resolution Island, with its dense fogs and its whirlpools, tossing about masses of ice, sweeping the ship among them, and rendering her utterly unmanageable. Having got clear of all the impediments, they proceeded as far as the Savage Islands, where an iceberg either toppled over or parted with a large mass from its summit; "and the splash in the water, the foam which succeeded, and the fearful rocking of the berg before it again settled upon its base, gave us some notion of danger."

Near these islands a fleet of kaiyacks and oomiaks hailed them, as usual, with vociferous cries of *teyma*. Back gives them the same bad character they had received from Lyon and others: "The women, in particular, were more outrageous than I had ever observed before; for, besides disposing of their garments, which they never hesitated to do, more than one actually offered to barter their children for a few needles." A young woman, observing that one of the officers had not much hair on his head, offered to supply him with her own at the price of a curtain-ring. These are the same Hudson's Strait Esquimaux which Lyon describes, and from whom he obtained carved figures of a dog and bear; and it is remarkable enough to find Baffin, in the year 1615, recording that, near the Savage Islands, "Among the tents I found a little bagge, in which was a company of little images of men; one the image of a woman with a child at her backe, all the which I brought away."*

On the 14th of August they fell in with Nottingham Island, which is close by Salisbury Island, the place where Back's instructions pointed out the two routes for his

* Barrow's Chronological History of Arctic Voyages.

choice; and unluckily, as has been said, he pitched upon that which was to lead him "with ease" through the Frozen Strait. Their course was now northwest; and they proceeded without much difficulty past the Trinity Islands, and beyond them as far north as lat. 65° 25′, and opposite to, but some distance from, the opening of Frozen Strait. The ship was forced toward it through floes of ice, "boring" as they went along, their object being to get near to Southampton Island, sometimes beset, and occasionally getting into a lake of water.

On the 5th of September they were firmly fixed in the ice; and the whole of the officers, "with axes, ice-chisels, handspikes, and long poles, began the laborious process of cutting away the sludge that bound the pieces together." The weather was thick, and though they knew themselves to be near the coast, they could not tell precisely whereabout they were, for their compasses were not to be trusted. On the evening of the 13th of September the Cape Comfort of Baffin bore north-northeast, and they were not more than five miles from the nearest rocks. Thumped about among hommocs of ice, and "severely nipped," Back says:

"At this time we appeared to be not more than four miles from the land, which was broken into exposed bays, utterly without shelter from the north, and blocked up with close-packed ice. Not a pool of water was visible in any direction: to the mercy of Providence alone could we look for rescue from our perilous situation. None but those who have experienced it can judge of the weariness of heart, the blank of feeling, the feverish sickliness of taste, which gets the better of the whole man under circumstances such as these. Not an incident occurred to relieve for a moment the dull monotony of our unprofitable detention."—P. 93.

Half the month of September had now slipped away, "and we were held still within sight of the same land, as if it were in the grasp of a giant:" a grasp which, from this time for eight or ten months to come, was as obstinately and firmly fixed as that of the Old Man of the Sea on the shoulders of Sindbad the Sailor. That same land was Cape Comfort, which Back had but too much reason to call "a most inappropriate name;" for, helpless as the ship was, wedged in between blocks of ice, and driven one day on one side and the next on the other of the

cape of this obnoxious name, and sometimes within three or four miles of it, he had reason to apprehend the worst consequences. For the whole of September, in fact, he was whirled about from Cape Comfort to Cape Bylof and Baffin's Island, and back again; and during all this whirling backward and forward, just as the wind, or the current, or the tide directed, his case was almost hopeless. Seeing the growing peril of his situation, Captain Back took the opinion of his officers as to the probability of any farther progress being made that season to Repulse Bay: their unanimous conviction, from the experience of the thirty-four days in which the ship had been beset, was, that any thing more with that view was utterly impracticable; and they suggested the adoption of certain precautions in the event of their being obliged to have recourse to the boats for safety.

It was now pretty obvious that there was but small chance for any escape from the "giant" for nine or ten months to come, and Back therefore made up his mind to cut a dock in a favorable large floe, which the ice-mate told him was the only one sufficiently strong for the purpose, and that the ship would be protected as long as it held together. Fortunately, however, the very next day a general commotion took place, when the whole body of ice separated into single masses, tossed into heaps, or ground into powder, and crushed every thing that opposed them, rushing violently to the westward, directly up the Frozen Strait; and thus ended for a time the projected floating dock, the floe having wholly disappeared; but others soon supplied its place, and the Terror was as fast as ever, without the labor of digging a dock. "Thus," says Back, "ended a month of vexation, disappointment, and anxiety, to me personally more distressing and intolerable than the worst pressure of the worst evils which had befallen me in any other expedition."

The month of November having commenced, it became necessary to set about a warming apparatus for the ship; but the experiment woefully failed. They were still off Cape Comfort, and so near the shore that the people strolled over the ice to it; and Lieutenant Stan-

ley went to survey a harbor, which he found a mile and a half long, by half a mile broad, and to which was given the name of Smyth's Harbor. On the 14th, the pack which had hurried them about had taken them, according to Lieutenant Stanley's measurement, within 3650 yards of the inaccessible cliffs of Cape Comfort, on which there was reason to apprehend that the ice might strike, break up, and wreck the ship; but she rested secure on her icy cradle, where she lay passively before the Comfortable Cape. On the 21st of November, in order to fix the minds of the crew on some object for employment, Back ordered them to build up snow walls and galleries on the floe; and these being for the comfort of all, the work was cheerfully undertaken, and the exercise had a beneficial effect on their health.

They may now be considered to have taken up their long winter quarters, of nine months at least, on a floating floe of ice; and Back, wisely recollecting the example of Parry, with the same view induced the officers to assist him in contriving some amusement for the men. They cheerfully assisted, and the farce of Monsieur Tonson was got up. It was ushered in with an appropriate prologue by Lieutenant Smyth, and set off with scenery by the brush of that accomplished artist; and the piece is stated to have gone off with hearty laughter, plentiful plaudits, and at the conclusion with three hearty cheers. This is as it ought to be; and so is the evening school instituted under the superintendence of Lieutenant Smyth, and occasionally visited by Back.

About two months before this, say about the middle of October, Captain Back gave his ship's company a very unfavorable character, which cheerfulness and occupation would seem to have had the effect of reforming: in point of fact, they were mostly undisciplined colliers, and almost equally undisciplined whale fishermen; he had only a few "men-of-war men," "who were worth the whole together."

"The want of discipline and attention to personal comfort were most conspicuous; and though the wholesome regulations practiced in his majesty's service were most rigidly attended to in the Terror, yet such was the unsociability, though without any ill will, that it was only by a steady and

undeviating system pursued by the first lieutenant that they were brought at all together with the feelings of messmates. . . . . Reciprocity of kindness, a generous and self-denying disposition, a spirit of frankness, a hearty and above-board manner—these are the true characteristics of the British seamen; and the want of these is seldom compensated by other qualities. In our case—and I mention this merely to show the difference of olden and modern times—there were only three or four in the ship who could not write; all read; some recited whole pages of poetry; others sang French songs; yet with all this, had they been left to themselves, I verily believe a more unsociable, suspicious, and uncomfortable set of people could not have been found. Oh! if the two are incompatible, give me the old Jack Tar, who would stand up for his ship, and give his life for his messmate."—P. 128, 129.

The weather and their situation were such now as to bring even these reprobates to their senses: the thermometer was at —53°, making the rapid extraction of heat beyond endurance, and causing the faces to be frost-bitten; and the fireplaces were so ill contrived as to afford no salutary heat; they created, moreover, "a fetid and impure atmosphere, that lurked in the lower parts of the deck:" all the while the Terror was tossing about on a field of ice, twelve or fourteen miles to the eastward of that detestable Cape Comfort. Under such *comforts*, the want of cheerfulness among such persons is not to be wondered at; but it may also have arisen, as Back suggests, from their never having been subject to the salutary influence of naval discipline. "It was in vain," he says, "we endeavored to lead them into the wholesome habit of amusing themselves with games or dancing, to cheer their spirits, and while away the long hours of our winter evenings."

On the 11th of January they found the Terror had been carried upon her ice-wagon to within three miles of Ridge Cliff, which would appear to be at the entrance of Stanley Harbor, about thirty miles to the southward of the interminable Cape Comfort. In February the cold was intense; the thermometer descended to —54°; several were on the sick-list, and Mr. Donaldson, a gunner, who had served with Parry, died. Well might Back begin to feel uncomfortable: "the eight months

since we left England seemed longer than any three years of my former not unadventurous life; days were weeks, weeks months, months almost years." But the worst was yet to come, and but just commencing: an opening in the floe was observed within forty paces of the ship; "a most unpromising sight, followed by innumerable cracks," which left no doubt "that the bulwark of our security had been shattered."

It still held together for three or four days, and, crazy as it was, carried them within sight of Sea-horse Point, the southern extreme of Southampton Island, when, on the 18th of February, the crashing of the ice at the eastern edge of the floe was alarmingly loud, followed by a hoarse rushing sound, and several severe shocks against the ship; and it is added, "the rent in the ice now formed one continuous line of separation, directly through the center on which the ship was mounted."

"The ship now began to complain, and strained considerably under the counter. She then heeled over to port, and relieved herself about six inches from the starboard embankment against the side, making by the effort gaping rents through the snow walls. At this time, the crashing, grinding, and rushing noise beneath, as well as at the borders of the floe, the rents and cracks in all directions toward the ship, herself suffering much, the freezing cold of —33°, combined to render our situation not a little perilous and uncomfortable."—P. 224.

The cracking, and groaning, and complaining of the poor Terror, and the interminable ice in which she was fixed, reminds one of the "Ancient Mariner" of Coleridge:

"The ice was here,
The ice was there,
The ice was all around;
It cracked and growled,
And roared and howled,
Like noises in a swound."

The shock ended by the ice breaking up into masses, and striking the ship violently every moment; and that which remained all round was so splintered and jagged, that to put a boat upon it was out of the question. No means, therefore, were left to convey any thing to the land, distant at least seven or nine miles; and Back says, "I think it at least doubtful whether any one, even with-

out encumbrance, could have reached it." On the 20th of February the whole of the ice was again in motion, and separated itself entirely from the starboard side of the ship, throwing down and carrying away these embankments, galleries, and walls of snow which had been erected for their convenience, exercise, and amusement; "some of the galleries," says Back, "were now floating in the water, looking like tunnels. To find ourselves at freedom to move would, two months later, have been the summit of our wishes; but now we saw it with reluctance, as it only mocked us with a hope which could not be realized, while it involved us in immediate peril." The ship, however, was now in the water, and subject to the *nips* and *rubs* of the masses, which are stated to have returned against her with accumulated force, and "to make her crack fore and aft with hideous creaking, that for some seconds held us in suspense for the result."

It would appear, however, from the continued cracking of the ship when the ice was still, and from her being lifted bodily, in one of these commotions, eighteen inches, that she had still the base of the floe to rest upon; and though frequently "squeezed" and repeatedly "nipped," she was at intervals jerked up "from the pressure underneath, with a groan each time from the woodwork." The enduring Terror continued day after day to receive this kind of treatment without any increasing leakage, which seemed to prove she was still out of the water; this was made manifest on the 1st of March, when "she became so hampered with ice underneath, that the remainder of the floe, on either side, moved about eight or ten feet ahead, leaving the ship fixed in the midst, and wedged up in every direction:" a novelty which, it is said, strangely puzzled the Greenland men.

In this way, with continual convulsive cracks and ominous tremblings, thus wedged in, the Terror was borne away in the midst of the ocean, Heaven knows where, for none on board could know, from the prevailing fogs and trustless compasses, till the 11th of March, when a little respite was afforded by the fineness of the day, which induced some of the men to amuse themselves by cutting figures of houses, forts, vessels, and men and

women from blocks of snow, with little boys in hats and trowsers, and depositing them on a smooth piece of solid ice clinging to the ship for exhibition: thus the light-hearted crew, in the first moment that the tranquillity of the ice and the returning warmth of the sun permitted, aroused themselves to indulge in a little gayety, and at once to forget past dangers. This state of tranquillity, however, was but of short duration: other concussions, and groanings and tremblings, some of them more severe and threatening than before, were renewed and long continued: the ship's condition will be best described in Captain Back's own words:

"On the 16th of March another rush drove irresistibly on the larboard quarter and stern, and forcing the ship ahead, raised her up on the ice. A chaotic ruin followed: our poor and cherished courtyard, its wall and arched doors, gallery, and well-trodden paths, were rent, and, in some parts, ploughed up like dust. The ship was careened fully four streaks, and sprung aleak as before. Scarcely were ten minutes left us for the expression of our astonishment that any thing of human build could outlive such assaults, when another equally violent rush succeeded; and in its way to the starboard quarter, threw up a rolling wave thirty feet high, crowned by a blue square mass of many tons, resembling the entire side of a house, which, after hanging for some time in doubtful poise on the ridge, at length fell with a crash into the hollow, in which, as in a cavern, the after part of the ship seemed embedded. The poor ship cracked and trembled violently; and no one could say that the next minute would not be her last, and, indeed, his own too, for with her our means of safety would probably perish."—P. 230.

On consulting his officers, they agreed that a light boat, with provisions, should, if possible, be landed [on the ice], to serve as a last resource to communicate with the Hudson's Bay Company's factory in the event of the loss of the ship, an event that might happen at any moment.

"We were in momentary expectation of seeing the two remaining floe-pieces, on which we were partly poised, separate, so as to allow the ship to settle into the water, especially when the outer portion of the cracked floe, on the starboard side, suddenly parted from its better half, and glided mysteriously away among the still rugged but looser fragments near. But when our favorite look-out, which we had jestingly de-

nominated Mount Pleasant, the faithful companion of our wanderings from Cape Bylot to this spot, stanch and unshaken amid the crash and ruin which had surrounded it—when this too departed, and became lost and undistinguishable among other peaks and hommocs, what could we look for but an utter desolation of all the parts of our system?"—P. 304.

Still they remained firm as a rock: the sides of the icy cradle had departed, but the foundation remained and carried its burden along with it at pleasure. On the 10th of April, being near Sir James Gordon's Bay, which is close to Sea-horse Point, they were met by rising waves of ice rolling their burdens toward the ship. "One had reared itself thirty feet on our inner floe-piece, which, strong as it was, gave way under the accumulated weight; and a mass of several tons being thus upturned and added to the original bulk, the whole bore down slowly upon our quarter."

"The ship herself was high out of the water, on the ice, but this overtopped her like a tower. Mean time we were getting nearer and nearer to the land-ice: large rents were showing themselves in the ice, at right angles on each side of the fore chains; the ship, unable to right herself, began to complain, and the scene every moment became more dark and threatening. Extra purchases were fixed to the pumps; the hands were turned up; the sick provided for; and, though nothing effectual could be done for our preservation, the attention of the men was occupied in hoisting two of the boats higher up.... What the result of that night might have been it is impossible to say, and painful to contemplate, had not an overruling Providence mercifully averted the crisis, by suddenly, and at the moment of the greatest peril, arresting the tumult."—P. 313.

On the 21st they were still off Sea-horse Point, but on the 23d found themselves twelve or fifteen miles from it, the ship's head pointing toward Mill Islands. In this new posture of affairs, Back says, "it was deemed expedient immediately to refit, as far as could be conveniently done." The sails, which had for so many months been useless, were put in order, the ship was scoured, and the provisions and other articles were brought on deck, ready, in case of need, to be restowed. On this day another death occurred, after a lingering disease, in the person of Alexander Young, a marine.

From the 10th of May till the 7th of June the ice

remained compact, and not a drop of water to be seen. On the 9th mention is still made of "our pack," unaltered in area, though slightly diminished in thickness, and on it "the after part of the ship lay immovably wedged." On the 11th of June the ice was again perfectly compact. Seven men were on the sick-list. On the 15th of June the ice still stuck to the ship in such a manner, that Back says "it looked as if the ship had been placed in a bed of some plastic composition, which time had indurated into the solidity, and almost the substance, of limestone rock." On the 20th they had been drifting near to Charles's Island; and from this day till the 8th of July the crew were employed in endeavoring to release the ship from her icy cradle, but she still remained impenetrably close.

On the 11th of July, as the crew were busy extricating *calves** and cutting a trench, Captain Back says, "Scarcely had I taken a few turns on deck and descended to my cabin, when a loud rumbling notified that the ship had broken her icy bonds, and was sliding gently down into her own element. I ran hastily on deck, and joined in the cheers of the officers and men, who, dispersed on different pieces of ice, took this significant method of expressing their feelings: it was a sight not to be forgotten." For three or four days after this the ship had remained, as it were, on her beam ends, so that "no one could move about the deck without holding on by the ropes to windward;" when, on the 14th of July, "suddenly, and before a word could be spoken, the liberated ship righted entirely," and "I know not," says Back, "how many cheers commemorated the occasion." It was indeed, as he says, "a scene not to be forgotten by the spectators."

The whole voyage, in fact, was of a nature so extraordinary and unparalleled in the history of voyages, ancient and modern, as not to be forgotten even by the readers of it, still less by the spectators. A ship actually cradled in the ice for four consecutive months, and dragged about utterly helpless, as indeed she had been full six months before, wedged immovably in or on floes

* Masses of ice below the surface of the sea, projecting from the main body above it.

of ice, after a previous month's severe exertions on the part of the officers and men to extricate her, so long as sails and warps were of any avail—such a case, it may confidently be repeated, has no parallel. To pass a winter among ice in a ship firmly fixed in a harbor or close to the shore, quietly and without hard labor on the part of the men, and with all their comforts about them, has not been found disagreeable; but to winter in a ship which for ten long months was tossed about amid interminable ice in the wide ocean, always in motion, and unceasingly threatened to be crushed to atoms, when every soul on board must inevitably have perished—such a case can not be contemplated without the strongest feelings of compassion for the helpless sufferers. And it is highly creditable and most praiseworthy to officers and men, and more particularly to the former, that by their steady and unrepining conduct they prevented despondency from seizing upon the minds of the latter. The tranquillity and constant good humor, not to say cheerfulness, of Captain Back, and the unremitting exertions of Lieutenant (now Captain) Smyth, are above all praise.

Nothing now was left but to get home as speedily as they could with the "crazy, broken, and leaky" Terror, which they succeeded in bringing safely to Lough Swilly. "Thus ended," says Captain Back, "an expedition from which, had it been permitted to reach its port of disembarcation, it was reasonable to expect the full accomplishment of its objects. Uncontrollable circumstances prevented it. The problem itself which it was intended to solve remains unaltered." Not quite so. In the two years following, the principal part of it was solved by two officers of the Hudson's Bay Company. Captain Back says that the season was so bad that the Hudson's Bay ship of that year was obliged to return without completing her voyage. It is to be hoped, however, that after the harassing difficulties experienced by Sir Edward Parry, and the failure of Captain George Lyon, and that now by Sir George Back, no farther attempt will ever be made where Cape Comfort and the Frozen Strait are concerned.

Captain Back's character is well known, but a short

sketch of his services may not be inappropriate. He entered the navy in 1808, in his thirteenth year, on board the Arethusa. The following year he had much boat-service on the coast of Spain; on one occasion he was in the lanch, which was captured, but not until fifteen men out of eighteen were killed or mortally wounded. Back was sent a prisoner to Verdun. On his release in 1814 he joined the Akbar, which was sent to the North American station, and on coming home, received the flag of Sir Byam Martin, and was sent to the Scheldt. In 1816 he passed his examination, and was appointed Admiralty midshipman of the Bulwark, and in 1818 Admiralty midshipman of the Trent, under the command of Lieutenant Franklin. The following year he again joined his friend Lieutenant Franklin, who was about to proceed to the coast of the Polar Sea, where his character for talent, activity, and exertion was fully established, and his humanity displayed by saving the lives of the whole party, at the expense of great personal suffering. On his return he was promoted to the rank of lieutenant, joined the Sea-horse, and was sent to Gibraltar, then to the West Indies, Bermuda, and Lisbon; from the last he returned to join his friend Franklin, as lieutenant on his second expedition, in 1825; came back in 1827, and was made commander. Being abroad for the recovery of his health, and having learned that Captain Ross and his nephew had not been heard of, he returned home, and by his own exertions, and the recommendation of the Royal Geographical Society to Lord Goderich, was appointed to proceed through North America to the eastern portion of the coast of the Polar Sea. The abstract of his journal has been described. He returned in 1835, and was promoted to the rank of captain. In 1836 the Admiralty decided that an expedition should be sent to Wager River or Repulse Bay, and Back, as we have just seen, was appointed to the command of H. M. S. Terror; and on his return from this disastrous voyage he received the honor of knighthood.

CHAPTER XIV.

MISCELLANEOUS.

1. *Narrative of a Second Voyage in Search of a Northwest Passage, and of a Residence in the Arctic Regions during the Years* 1829-30-31-32-33. By Sir JOHN ROSS, C.B., K.S.A., K.C.S., &c., &c., Captain in the Royal Navy.
2. *Report from Select Committee on the Expedition to the Arctic Seas, commanded by Captain John Ross, R.N.* Ordered by the House of Commons to be printed, 28th of April, 1834.
3. *Narrative of the Discoveries on the North Coast of America during the Years* 1836-39. By THOMAS SIMPSON, Esq

HAVING put on record the title of the narrative of this second voyage, together with the multifarious personal distinctions, &c., any farther notice of the "Narrative" of Captain John Ross (as he is simply described in the Report of the Select Committee) will be dispensed with, mainly for the reason that the "second voyage" was a private speculation, not authorized by any branch of the government, and that the report of a committee of the House of Commons preceded its publication; it may therefore be supposed to contain the substance of the most material points in the "Narrative," and on that account the only notice of it will be confined to the proceedings of this committee.

Besides, the title-page of the book gives no encouragement for one to look into it, especially one who was using his best endeavors to promote expeditions for the search of a northwest passage, which Captain John Ross repudiates, though, with his usual consistency, he announces his book to be the "Narrative of a Voyage *in Search* of a Northwest Passage." And this he still announces *after* the following questions and his answers, on examination before the committee, had been published:

"Do you conceive that any farther attempt to discover the Northwest Passage would be attended with great danger?"

Captain Ross says, "I do."

"And if successful, would it be attended with any public benefit?

"I believe it would be *utterly useless*."

A farther question might here properly enough have been put, but was not: "Then why did you go in search of a thing so utterly useless, and attended with so much danger?" And now (having assigned reasons for not meddling with the "Narrative") to proceed. It is not the business of any one to search into the real object that could have induced a captain of the navy to take the command of a merchant ship, without a commission, without official instructions, and without any authority but such as is given to the skipper of a trading vessel, or to inquire into the motives that could actuate a wealthy spirit-distiller to supply £17,000 for the outfit of the said vessel. It may perhaps, at first, have worn the appearance, from the profound secrecy with which it was desired by the contributor to be conducted, of having originated in the prospect of being a promising speculation; and so indeed it turned out, notwithstanding the most discouraging outset, and the distressing circumstances that attended the execution of the voyage; for it was entirely owing to the latter that the projector of it received a grant of money beyond his outlay, and the proprietor, if he may be so called, received for the money he advanced the grant of a distinguished honor: thus it is to be hoped that the expectations of both have been satisfied; nor will they be considered by any one as misplaced, the one being a remuneration for his long sufferings and anxieties, the other for his disinterested and munificent generosity.

The history of the undertaking is a short one, and told by the parties themselves to the committee moved for by Mr. Cutler Fergusson, a Scotch member of Parliament, the object being to obtain for Captain Ross the sum of £5000 as a compensation for the expenses incurred by him, amounting to between £2000 and £3000, and in consideration, it may be supposed, of his sufferings: a sum which would at once have been awarded by the House of Commons, and thus have spared a great deal of nonsense in the committee, as will be seen in the few extracts that will here be produced. We have,

first, the history of the expedition, which is doubtless the true one.

Captain Ross examined:

"What was the inducement to you to undertake this last expedition?

"When his majesty became lord-high-admiral I sent in my propositions, and afterward again to Lord Melville, when he became again first lord of the Admiralty: I received an answer that they did not intend to pursue it any more.

"What was the cost of the expedition?

"The cost of the expedition was £17,000 to Mr. Booth and £3000 to me.

"Did your men express themselves satisfied with what had been done to them by the Admiralty?

"Every one of them; they all rejoiced that the Admiralty had behaved so well to them." [The Admiralty gave them double full-pay till they abandoned the ship, and full pay afterward, in all £4580.]

Mr. Felix Booth examined:

"Perhaps you will have no objection to state the circumstances which induced you first to undertake the charge of the enterprise which Captain Ross commanded?

"Not in the least. I had known Captain Ross for some years, and I undertook it for the credit of the country and to serve Captain Ross, thinking that he was slighted in his former expedition; that there was a cloud hanging over him, and that he was anxious of an opportunity of going out again. I felt interested that all discoveries should be made by our countrymen. He said he should very much like to go out again, and thought he could do it at a small expense. I said, 'Well, then, put down, and let me see what you call a small expense.' He afterward brought me a paper, making it about £10,000. I said, 'Well, I should have no objection to advance £10,000, if that would be the utmost sum required;' but I said, 'I will not engage in it, because there is £20,000 reward for any person who shall discover the passage, and it would look very much as though I had an object in view.'

"About a twelvemonth after he came to me, and said Now it is all over; the reward is done away with.' I then said I was glad of it, and if he wanted assistance I was willing to give it; he was amazingly delighted: on which I told him, 'I will assist you, but remember it must be in the utmost confidence, and I will not do any thing that is inimical to government.'

"In the event of Parliament voting any money to Captain Ross, have you any expectation of receiving any portion of it?

"Certainly not.

"Your object in making this munificent sacrifice of private fortune was solely for the advancement of the honor of the country, the interest of science, and to gratify the feelings of a friend?

"Precisely; that is the truth."

Thus far every thing appears to have been conducted with great liberality on one side, and with a proper feeling on the other. If, as Mr. Booth states, Captain Ross felt a cloud was hanging over him on account of ill-natured reports, and, moreover, felt himself slighted, he certainly took the most proper method of silencing them, by going out once more to the same spot where he had undoubtedly failed on the former expedition; but the slight he received must be imaginary, for he was promoted to the rank of captain immediately after his return from a few months' voyage of pleasure, for so it may be called. Captain Ross has since endeavored to expiate the fault imputed to him by a second expedition, though a private one, in which, however, he has committed some grave geographical errors, and made some other very absurd observations, into which he was incautiously led by injudicious and not very appropriate questions of the committee.

The money being promptly forthcoming, a ship called the Victory was purchased, and fitted out with steam-engine and paddle-wheels, which turned out, as Ross, professing to be a good mechanic, ought to have foreseen, a perpetual and harassing encumbrance. The manning of this vessel consisted of himself, Commander James Ross, Mr. M'Diarmid, surgeon, Mr. Thom, purser, and a crew of nineteen men, making in all twenty-three persons. They left England in June, 1829, reached Davis's Strait in July, and Lancaster Sound in August; found no impediment in proceeding to the western side of Prince Regent's Inlet, and from that side to the beach where the Fury was wrecked, but no appearance of the vessel, having either gone to pieces or gone to the bottom. The tent-poles, however, were still standing, and vast heaps of casks, cases, and canisters were observed to be piled up; and, on landing, all found to be entire. The Victory was therefore moored, in order to put on board her as much bread, flour, wine, spirits, sugar, cocoa, &c.,

as she could stow, after which the heap is said to have been scarcely diminished. There is some reason to believe that this precious deposit of stores was one great cause of Ross having taken this route, though he told the committee it was in search of what had been agitated the last 200 years, and also that the object was to decide whether there was that passage, to which Captains Parry and Franklin had devoted their attention. But he meorover told the committee, "I should not have been justified in going if I had not known that the stores of the Fury were in Prince Regent's Inlet." He knew of what they consisted from Parry, and might, perhaps, have been in possession of an invoice of the whole, amounting, it is said, to three years' consumption.

By the end of September the Victory reached a harbor on the southeast corner of the land which she had been coasting, and to which, out of gratitude, Ross gave the name of Boothia; but the northern part of this coast, for about a hundred miles, had been named by Captain Parry North Somerset, and it was about two hundred more to the harbor, to which was given the name of *Felix*. Here the Victory was frozen up for the winter, and remained fast bound up just twelve months.

This is all stated before the committee, a portion of whose proceedings follows. But, in the first place, it may be right to point out that the committee, in their report, have been grossly misled in stating, among the great public services which Ross has performed, "the *demonstration* that one passage, which had been considered by preceding navigators to be one of the most likely to lead from the Atlantic to the Pacific Ocean, *does not exist*." Now what was this demonstration? They had asked him if he conceived he had ascertained the fact that no practicable communication existed between the Atlantic and Pacific Ocean, and he replies, "Positively to the southward of the 74th degree:" and he farther takes occasion to tell them, "We established Leopold's Island to be the northeast point of America:" in other words, no communication exists between the western and the eastern seas to the southward of that point; and his demonstration, or positive proof, is thus brought out.

Captain Ross examined:

"Did you observe the difference in the altitude of the two seas east and west of Boothia Felix?

"Yes.

"What was the difference?

"The difference is thirteen feet.

"Upon the supposition that the land is continuous northward from the 74th degree to the Pole, should you expect to find that difference of altitude in the seas?

"I should certainly, from the *rotative* motion of the earth."

The learned member who put these questions seems not to have been satisfied with the replies which he had received from Captain Ross, for on a third examination he returns to the charge:

"You stated, among the other reasons you gave, that there was no northwest passage practicable; that there was a difference in the altitude of the two seas east and west of the isthmus which unites Boothia with the continent of America?

"Yes; I was the only officer there: Commander Ross had no opportunity of ascertaining it; it was while he was on other services: it was when I went with the provisions to him I ascertained that; in two years, in June, 1830, and the end of May, 1831.

"The observations made at two different times both led you to the same result?

"Yes.

"Have you any doubt upon that?

"Not at all; I measured it with the theodolite in the usual way; the process becomes very simple, and incapable of error to *those who understand it.*

"There is a difference, is there not, in the altitude of the Pacific and Atlantic Oceans on the east and west sides of the Isthmus of Darien?

"I have heard there is, and the Red Sea and the Mediterranean also; there is eight feet rise and fall of tide on *those isthmuses*, and only fourteen inches on the west side; I tried that at the time; I broke a hole in the ice for the purpose."

Captain Ross must here have been sadly bewildered, which caused him to talk unintelligible nonsense. The member who put the question did not ask for explanation, but for a simple fact. He appeared, indeed, to be himself somewhat in the dark. Had he consulted his Arrowsmith, he would have found that the Isthmus of Darien has neither *east* nor *west* sides—they are north

and south. *Those isthmuses* in the Red Sea and Mediterranean are utterly unintelligible; and those of Boothia and Darien are calculated to put one in mind of the rivers of Monmouth and Macedon. There is an Isthmus of Darien and an Isthmus of Boothia, "and there is *thirteen* feet water at both;" the thirteen feet appears very much to have been borrowed from Mr. Lloyd's "Darien." The examiner would seem not yet to have been satisfied with the process of the theodolite and the hole in the ice; he should have inquired what was the result of the hole; did it, like one of the Geysers of Iceland, throw up a jet of thirteen feet, not of hot, but salt water?

Commander James Ross was asked,

"Are you aware of the fact, that the two seas right and left of the isthmus which connects Boothia with the continent of America are of different altitudes?

"No, I am not; nor had we the means of ascertaining the fact with accuracy; it would take at least two or three months to ascertain it with the accuracy such an observation would require.

"You have no reason to suppose such a thing?

"None whatever. No; *I never heard of it till this moment.*

"Has Captain Ross never told you that he had ascertained that to be the fact?

"Captain Ross may have made observations which have satisfied his mind; but I doubt whether he can have made observations that would satisfy the minds of those who may investigate the matter."

So much for Captain Ross's "*demonstration*" of the water-built wall, 13 feet high, extending from Boothia to the North Pole, and his joining Boothia to North America; yet he satisfied the committee, as appears by their report, that a passage south of Boothia *does not exist.* But the committee and Ross also shall be satisfied, before this chapter closes, that not only is there no such junction, but that they are completely divided by a navigable strait, ten miles wide and upward, leading past Back's Estuary and into the gulf, of which the proper name is Akkoolee, not Boothia; and, moreover, that the two seas flow as freely into each other as Lancaster Sound does into the Polar Sea, and are, of course, on the same level.

Next after this lucid demonstration, it remains to be explained by what process he utterly demolishes the Northwest Passage. It has already been noticed that Captain Ross conceived any farther attempts to discover the Northwest Passage would be very dangerous, and, if successful, would be utterly useless.

Ross was asked:

"The indications that were relied upon in the beginning of these voyages of discovery, as to leading to the conclusion that a passage might be found, have totally failed?

"They have been totally disproved."

Commander James Ross:

"What was your experience in former voyages?

"I had been in five former expeditions, and had been engaged about ten years in those seas.

"Did you, in fact, accompany all the preceding Arctic expeditions sent to those seas on discovery?

"I accompanied all the recent expeditions sent to those seas on discovery.

"On how many of them had Captain Ross been?

"Only on the first.

"How many summers have you passed on those seas?

"Fourteen summers, and eight winters.

"You do not think the voyage has furnished any conclusion against the existence of a northwest passage?

"No; it has made it still more certain than it was before that a northwest passage must exist.

"Upon what observations made in the last voyage do you ground that opinion?

"From the additional portion of the outline of the continent of America explored on this occasion, on the eastern coast of America, and the western coast of Boothia.

"Do you believe that it would be practicable to go through that northwestern passage?

"There is no question that it would be much more easy now that we are acquainted with the nature of the formation of the continent of America."

Captain Francis Beaufort examined:

"Has the voyage undertaken by Captain Ross, in your opinion, been equal in importance, with respect to the question of the northwest passage, with previous voyages undertaken for the purpose of ascertaining it?

"I do not know how to shape an answer to that question, unless by measuring the number of miles discovered in each voyage.

"Do you consider that the closing up of Prince Regent's Inlet narrows the range within which a northwest passage may be found within a short compass?

"It only narrows it by one of the openings.

"Does it narrow the opening to something above 74 degrees north latitude?

"There are several openings from the end of Lancaster Sound. Prince Regent's Inlet was one of them: by closing that, he has removed one of the probable means of getting to the westward; but there are three still open.

"Will you specify their names?

"One is going out by the Wellington Channel to the northwest; another proceeding by Melville Island; and the third would be by getting to the southwest after passing the cape, which Captain Ross *supposes* [asserts] to be the northern extreme of America, toward the shore laid down by Franklin and Richardson.

"Do you consider that the closing of the most southerly outlet closes that supposed to be most likely to be practicable?

"No; for that is not the route I should have taken if employed on that service."

Nothing farther need be said on Captain Ross's opinions regarding a northwest passage; but as Commander James Ross is the officer who did all that was done, or could be done, and appears not to have been treated on this committee as he ought to have been, it may be proper to state, briefly, an outline of what he did on this voyage, in addition to what has been said of him at the conclusion of Parry's "Polar Voyage."

The first year after reaching Felix Harbor, Commander Ross made five or six journeys from the ship, of about a month to ten days or a fortnight each. On the first he discovered and crossed the Isthmus of Boothia, which joins it to a peninsula. On a future journey he ascertained it to be fifteen miles in width, with a lake in the center, and five miles of land. To a question of the committee as to what part he took in the geographical discoveries made, his reply was, "The whole extent of geographical discovery is perhaps between 600 and 700 miles of new land; out of that probably about 260 miles were discovered in the ship as she proceeded down the coast; the remaining 400 or 500 were discovered by myself, with parties of three or four men detached from the ship—expeditions that

were severally planned and conducted by myself." He also states, in reply to farther questions, that observations in geology, natural history, and botany, with the collecting of specimens, were made by himself, he being the only person who at all understood the nature of those subjects. He is then asked if he personally made the observations from which he inferred that he had discovered the true position of the magnetic pole. "I did," he says, "for two years previous to the time I went to the magnetic pole. I was engaged in observations necessary to determine its exact position; having ascertained that spot, I then conducted a party to the point so determined, and there I made a series of observations by which I ascertained that to be the exact position of the magnetic pole."

It must be considered most ungenerous, on the part of Captain Ross, to detract, as he does in his examination, from the merit of his nephew, who alone deserves the credit of having fixed the point, as near as is capable of being done, of the Western Magnetic Pole. In his answers to the committee he never once considers Commander Ross as the sole discoverer, but would make it appear that every thing was done in his presence, and with his co-operation: thus, for instance, he says, "*we* were in a position where the compass had no power of traversing—by continuing *our* observations *we* arrived at the spot—*we* passed round it—whichever way *we* passed it, as *we* passed round it, the compass turned toward it horizontally." The truth, however, was elicited at last.

"How near were you *yourself* to the point of the Magnetic Pole?

"I suppose I was within *forty miles*."

And this, then, must have been the distance at which *we* were walking round it. The committee might have had the sagacity to ask him how long it took him to walk *round* the circuit of one hundred and twenty miles. They did ask him another kind of question:

"Within what area do you conceive you have reduced the situation of it?

"One mile."

The same question being put to Captain Beaufort, he replies, "There can be no specific or precise point to

fix the situation of the Magnetic Pole within a degree or half a degree."

It was a general belief at the time, that, had Captain Ross's conduct before the committee been of a contrary tendency, the committee would have been disposed to have recommended for his nephew, what he richly deserved, some pecuniary reward, as compensation for his losses, which amounted to £300 or £400. Every thing, in fact, in this ill-advised expedition, rested on the talent and activity of the commander: it is not clear, indeed, that the lives of the whole party did not depend on him. The committee ask him:

"Had you an opportunity of personal participation in any specific service to the expedition, by which you consider that the lives of the people were preserved?"

He modestly replies,

"I do not know whether I should quite say I had; but certainly it was essential to the safety of the people that I should leave them on one occasion. Accompanied by two of the strongest of the party, I advanced toward the Fury's stores, to see whether they were there or not; for, had they gone there without finding the provisions, the whole, or nearly the whole, party must have perished; but by my going and returning with a supply of provisions, I enabled them to reach the Fury's stores."

Captain Ross should have been the last person to throw any impediment in the way of remuneration to his nephew. He and his crew were amply rewarded in money, and himself in money and in honors; the former was very properly bestowed, for his boldly engaging in so hazardous, though ill-advised an enterprise, for the sufferings of himself and party, and for the long-continued anxiety, which money can only poorly reward: of the latter no one will envy him; a few foreign princes may think themselves *flattered* by having their names dotted along the coast-line of a thing called a chart, but the King of England's family are not so easily captivated by baits of this kind. Captain Beaufort says, "Captain Ross brought to me a chart to prepare for the king, which I did, and returned it to him; and there is no copy of it left in the Hydrographical Office:" and as Captain Beaufort makes no description of it, neither

will any be made here; the less that is said of it the better. The honors, however, have been carefully preserved, and copied into a certain repository* for general information, as follow:

"Ross, Captain Sir John, entered the navy in 1790; fifteen years a midshipman; seven years a lieutenant; seven years a commander; became a post-captain in 1818; received numerous marks of public approbation in *consequence* of his Arctic Expeditions; was made a Commander of the Sword of Sweden; a Knight of the Second Class of St. Anne of Prussia (in diamonds); Second Class of the Legion of Honor; Second Class of the Red Eagle of Prussia; Second Class of Leopold of Belgium; gold medals from the Geographical Society of London, the Geographical Institute of Paris, the Royal Societies of Sweden, Austria, Denmark, &c.; the freedom of the cities of London, Liverpool, Bristol, Hull, &c.; six gold snuff boxes from Russia, Holland, Denmark, Austria, London, and Baden; a sword valued at £100 from the Patriotic Fund; a sword, value £200, from the King of Sweden, for service in the Baltic and White Sea, &c.; and numerous other acknowledgments of his *eminent services* in the expedition to Baffin's Bay in 1818, and his discovery of Boothia Felix and the North Magnetic Pole! Is now consul at Stockholm, to which office he was appointed in 1838."

Franklin, Parry, James Ross, and Richardson, be contented with your simple knighthood, assured that you have no occasion to covet any of the numerous honors and *et ceteras* carefully registered in Mr. Dodd's list, and knowing that your merits are enrolled elsewhere.

The result of all the nonsense about *isthmuses*, theodolites, and holes in the ice, and the absurdities to which they gave rise, have been completely quashed by the persevering and energetic labors of Messrs. Dease and Simpson, two officers of the Hudson's Bay Company: their extensive discoveries are contained in a small volume, which carries with it the stamp of truth and modesty.† These gentlemen have surveyed the remainder of the western part of the coast, left by Franklin, from his *Return Reef* to *Cape Barrow;* again, from Point Turn-again to the eastward, as far as the

* Dodd's Peerage, Baronetage, and Knightage, &c.

† Narrative of the Discoveries on the North Coast of America, effected by the Officers of the Hudson's Bay Company, during the years 1836–1839. By Thomas Simpson, Esq.

Gulf of Akkoolee : to this latter portion the notice here taken must be confined.

In July, 1839, they entered the Coronation Gulf for the second time with their two boats, passed Cape Turn-again, and, from a point on the continent of America to the eastward of Turn-again, they thence observed to the northward a large tract of land, to which they gave the name of Victoria, either joining with, or separated by a strait from, Wollaston Land. On their return they traced the coast of Victoria for about eleven degrees of longitude. From Cape Alexander, the southern coast of the Polar Sea trended southernly to a large bay crowded with islands, which they called Labyrinth Bay, opposite to which was Melbourne Island. Lower down the coast, in latitude 58°, was Sir Guy Campbell's Bay, into which Ellice River poured its waters—a stream described as much larger than Copper Mine River; the bordering country consisting of green flats, little lakes, and knotty knolls. This coast still descended to the southward, Ogden Bay being the lowest, in latitude 67° 36′, longitude 101° 15′.

On the 10th of August they found the American coast trending to the northeastward, and "proceeded all day among islands, so that some of the party began to apprehend we had lost the continent altogether." In the evening, however, the rapid rush of the tide and the position of Back's River "left no longer any room to doubt the neighborhood of an open sea." But Mr. Simpson says, "I candidly acknowledge that we were not prepared to find so southerly a *strait* leading to the estuary of the Great Fish River (Back's), but rather expected *first* to double Cape Felix of Commander James Ross, toward which the coast had been latterly trending." Their object had been to proceed northerly as far as Cape Felix, and they continued in a direction along the coast which would have led them to it; but, on finding a separation by their newly-discovered strait leading to the eastward, they entered by doubling the southern point of it, which they call Geddes; they proceeded along that coast, on a point of which Simpson landed, and found that to be Back's *Point Ogle*. They entered the estuary, passed Point Pechell, and ascended

southernly to Montreal Island, on which they landed near the spot where Back had encamped; and under the guidance of M'Kay (one of Back's men), they discovered among the rocks a deposit of bags of pemmican, chocolate, canisters of gunpowder, and percussion caps. The pemmican is said to have been "literally *alive*," and the chocolate rotten. Some minor articles were taken possession of by the two leaders, "as memorials of our having breakfasted on the identical spot where the tent of our gallant, though less successful, precursor stood that very day five years before." They had thus determined the northern limits of America to the *westward* as far as Back's Estuary; it still remained a question whether some part of Boothia might not be united to the continent on the *eastern* side of the estuary. Doubling, therefore, its eastern promontory, they passed a point of the continent which they named Cape Britannia, and another called Cape Selkirk; and proceeding toward some islands in the Gulf of Akkoolee, so far as to satisfy themselves that they were to the eastward of any part of Boothia, they began to consider that the time of the year made their return expedient. Whereupon they commenced preparing their boats at this their *farthest* advance, and took the same route back, with this difference, that in passing Simpson's new strait they now coasted it on the *northern* side, and designated the western entrance cape, on that side, by the name of Herschel, where they erected a cairn, with the date 26th of August, 1839. The strait was there ten miles in width, and much more at the entrance near to Back's Estuary; at one place, about the middle, it was only three miles, and its depth from thirteen to sixteen fathoms.

Mr. Simpson gives some observations on the dip of the magnetic needle. He says, when the Magnetic Pole bore from them N. 7° E. 105 miles, the dip was 89° 29′ 33″; when N.N.E. 90 miles, it was 89° 28′ 45″; and when off Cape Britannia, it had decreased to 89° 16′ 40″, "as might have been expected from our increasing distance from the Magnetic Pole."

On their return along the coast of America, they crossed over to near Point Back—on the land of Victoria, and traced that shore as far as Point Parry—a space

of one hundred and fifty-six geographical miles; but this land extended both to the east and to the west beyond these two points; and they supposed, as before mentioned, that a wide channel might divide the latter from Wollaston Land. Their next object was the mouth of the Copper Mine River, which they reached on the 16th of September, "after by far the longest voyage ever performed in boats on the Polar Seas, the distance we had gone not being less than 1408 geographical miles."

Their account of the whole line of the Polar Sea coast of North America, from Icy Cape to the Gulf of Akkoolee, is well worth perusing; but it is time that the present volume should draw to its close. The annexed small chart contains the combined discoveries of Ross, Simpson, and Back, on that portion of the North Coast of America opposite to, but divided from, the southern part of the Island of Boothia (itself a portion only of North Somerset), which united must now take their place among the numerous clusters that crowd the eastern part of the Polar Sea, some of them to a distance northerly yet unknown.

It will be seen by the chart that Sir James Ross thinks it not improbable, since the discovery of the land seen by Simpson, and marked on the chart "Captain James Ross's Point," that the vacant *dotted* space between Point Scott and Cleft Mountain may be land, as he has marked it; and also that the space between Cape Smyth and Point Scott may be a wide channel, opening into the lower part of Prince Regent's Inlet: should this be so, it will form the continuation of his *own strait*, through which not only a single ship and boats, but whole fleets, may pass. At the same time, it must be admitted that conjectural geography is never safe: the direction of a coast-line, or the course of a river, can only be known, and then imperfectly, to the distance of the farthest point of sight; to arrive at correctness, they must be traced.

The object of this miscellaneous chapter, with the small chart, is to point out distinctly, and to correct, the erroneous impression which the Report of a Select Committee of the House of Commons is calculated to

convey, founded on the most absurd nonsense, given in evidence before the committee, especially that part of it from which a conclusion is drawn that a passage *does not exist* between the bottom of Prince Regent's Inlet and the Polar Sea, which has since been proved to be wholly incorrect.

THE END.

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